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ABSTRACT

Results of a 1977 survey of a national sample of Title VII bilingual education project directors and teachers are presented. The survey was designed to assess their needs for materials development and technical assistance in order to aid network centers in making decisions on which types of materials, training, and services should be emphasized. All of the approximately 425 Title VII Basic projects were sent questionnaires, and 170 (about 40%) responded. Information is provided on language groups represented in the survey sample, grade levels and subject areas, teachers' experience in the profession, the availability and usefulness of various types of instructional equipment in the bilingual education classroom, the importance of information received/not received from a list of sources, the value of information on each of seven topics, training needs, needs for testing measures, the need for Spanish/English bilingual instructional materials, and teachers' problems with materials. (SW)

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ED188459

Summary Report on the National Assessment Survey of Title VII ESEA Basic Project Directors' and Teachers' Needs for the Products and Services of the National Network of Centers for Bilingual Education

prepared by:

Sheila R. Reifle and Ross P. Goldsmith

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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PREFACE

This report is a summary of the findings of the National Assessment of Title VII ESEA Project Directors' and Teachers' Needs for the Products and Services of the National Network of Centers for Bilingual Education. The results reported in this volume reflect the data collected from Title VII project personnel across the country. With the exception of the sections on needs for materials and instruments, the results presented are combined across geographic areas and languages. The sections on needs for materials and instruments represent Spanish language needs only.

The analysis presented in this report is primarily descriptive. It is intended to provide an overview of the needs of Title VII ESEA Basic Projects nationally. The results of the survey are presented in detail so the reader can extract information most pertinent to his or her needs. The narrative description of the survey findings highlights the more obvious trends but is not intended to be taken as exhaustive. The reader is encouraged to study the tables and extract information directly from the data as well as from the narrative.

During the next year we intend to conduct a follow-up survey to improve the representation of Title VII ESEA projects in geographic areas such as the Northeast, Southeast, and Midwest that are currently under represented in our data base. We will also survey a sample of projects that are funded for the first time beginning in the Fall of 1978.

We also intend to produce a series of indepth reports on selected topics. These monographs will contain more sophisticated analyses of sections of the data than is offered in the present volume. Reader suggestions for these monographs are encouraged and should be addressed to the present authors.

Custom searches of our data files by geographic area and/or language can be made on request. Requests for such searches should be addressed to the present authors. These requests will be honored within the limitations of available resources.

Additional copies of this report are available from the Dissemination and Assessment Center for Bilingual Education, 7703 North Lamar Boulevard, Austin, Texas 78752.

ACKNOWLEDGMENTS

We wish to thank the school districts and the ESEA Title VII projects for their cooperation in this study. Without the feedback provided by teachers and administrators across the country, this study would have been impossible.

Many individuals have been involved as DACBE project staff with survey since its inception late in 1976. We would like to acknowledge the invaluable contributions made by Avi Blattstein during the instrument development and study design phase of the project. His efforts in researching parallel studies enabled us to focus our attention on a narrower set of concerns than had been initially anticipated. We also wish to thank him for his contributions in developing the questions ultimately used in this survey.

The extensive amounts of data collected in the study involved complicated data management and analysis activities. We would like to thank Sheila Reifle for designing and implementing these data management and analysis activities and for preparing major portions of this volume. The successful implementation of this study is largely a result of her efforts.

Evangelina Mangino and Roberto Leos, both DACBE Assessment Component staff members, provided invaluable assistance in the design and implementation of the study from its inception through the preparation of this report. Their contributions to the design and execution of the project were extensive. Pam Harper, Magdalena Sumpter, and Gloria Hernández

provided considerable assistance in reviewing portions of the report for readability, formatting, and general editing.

Dr. Richard Willard of the Dissemination and Assessment Center at Cambridge, Massachusetts, provided substantial assistance in the development of the questionnaires and the implementation of the survey on the East Coast. Dr. Charles Leyba, Director of the Dissemination and Assessment Center in Los Angeles, made significant contributions to the study through his energetic data collection activities on the West Coast.

Accurate coding and checking of the collated data involved considerable diligence and attention to detail. We would like to thank Elizabeth Pannill and Michael Riesett for their careful work and attention to the many details involved in accurately preparing the data for keypunching. They also provided valuable assistance in preparing the tabular presentations in this report.

This report was typed by Sandy Lawrence, Susan Duke, and Julie Miller, administrative secretaries in the Region XIII Education Service Center's Division of Planning, Evaluation, and Administrative Services. The painstaking task of accurately transcribing the numerous tables in this report was performed by Regina Bayanduryan, typist in the Word Processing Center in this division. Their patience and competence played a significant role in all aspects of this study, especially during report preparation.

We would like to thank Ernest Pérez, Director of Bilingual Education at the Texas Education Agency; Joel Gómez, Director of the National Bilingual Education Clearinghouse (both of whom are former directors of DACBE at Austin); and Carlos E. Pérez, current DACBE director, for their suggestions and assistance in designing and implementing the study.

Finally, we wish to thank Dr. David Gillmore, Director of Planning, Evaluation, and Administrative Services, and Dr. Royce King, Director of Program Development, for their administrative and professional support and contributions to the study. Without their guidance and assistance on behalf of the grantee, Education Service Center Region XIII, this project would not have been possible.

While we acknowledge the important contributions made by all the individuals involved in this project, the views expressed in this report remain the responsibility of the authors.

Ross P. Goldsmith

This summary report of the needs assessment survey was written in fulfillment of the following objective:

> To complete a needs assessment within the designated service area in cooperation with other centers and SEA's to determine the comprehensive materials developmental and technical assistance needs within the designated service area.

The underlying purpose of the needs assessment is to provide Title VII Bilingual Network Centers with useful information which will enable the centers to improve the services and products they provide to Title VII classroom projects. Such information includes needs for materials and technical assistance and the order of priority for these needs at the local project level. This information is designed to assist network centers in making decisions concerning which types of materials, training areas, or other services should receive priority in development and availability in order to better meet the needs of their clients, the children in the projects.

This survey was conducted nationwide by the three Dissemination and Assessment Centers (DACs) located in Austin, Texas (DACBE); Fall River/Cambridge, Massachusetts (NDAC); and Los Angeles, California. DACBE (Texas) and NDAC (Massachusetts) collaborated in developing the survey instruments, and they agreed to conduct the administration of the survey by mail within their respective network service areas.

Instruments

The first draft of the survey instrument was developed at the DAC in Austin, Texas (DACBE). After collaboration with staff from the Austin DAC, staff at the DAC in Cambridge, Massachusetts, developed a revised version. Following a U.S. Office of Bilingual Education (USOBE) moratorium on the needs assessment survey in the spring of 1977, Austin DAC staff further revised the instruments and produced the final version which was used in the survey. Copies of the survey instruments appear in the Appendix.

The instruments consist of two questionnaires, one to be filled out by project directors and one, by project teachers. Most of the items in the two questionnaires are identical; the same information was requested from both directors and teachers so that results would reflect both points of view. The items that differ between instruments tap information that could be provided more conveniently by either a project director or a teacher. For example, the Teacher Questionnaire asks about teaching experience and subject areas taught while the Director Questionnaire asks about language(s), numbers of pupils, and grade levels served by the project.

The first part of both questionnaires consists of items which seek to describe the project and the pupils being served by asking about languages used in the project, numbers of pupils and their

grade levels, teacher experience, and subject areas and grade levels being taught. These items provide the demographic data for the survey results.

The next three questions (numbers 4, 5, and 6 for the teacher and 2, 3, and 4 for the director) are grouped together because of their similar formats. The respondent is asked to rate the usefulness, importance, and value of items of equipment, sources and information, and topics of information, respectively. Furthermore, the respondent indicates whether the rating applies to equipment or information which is available or not available. In the case of not available responses, the rating is an estimate of how helpful the equipment or information would be if it were available.

Question 5, 6, and 7 in the Director Questionnaire and 7 and 8 in the Teacher Questionnaire concern training needs for teachers, paraprofessionals, and project administrators. Directors respond for all three staff positions; teachers are not asked about project administrators. In each question the respondent is asked to indicate the "extent of need" for training for each item in a list of possible training areas. If need is expressed, the respondent is asked to check which problem areas have been encountered in attempting to meet training needs.

The next two questions (numbers 8 and 9 for the Director Questionnaire and 9 and 10 for the Teacher Questionnaire) allow the respondent to describe needs for measurement instruments and instructional materials. The respondent indicates the language(s) needed, the grade level(s), the subject area(s), and the type(s) of instruments or instructional materials desired.

The Teacher Questionnaire has one last question about problems the teacher may have in obtaining or using materials. From a list of problems, the teacher is asked to check those which have been encountered.

Procedure

The strategy for conducting the survey evolved as the instruments were developed. In order to obtain as large a respondent sample as possible, it was decided to conduct the survey by mail. The instruments were accordingly revised to facilitate their completion by project directors and teachers. Since the DACs agreed to assume responsibility for conducting the survey in their own network service areas, the specific survey procedures followed differ somewhat among the DACs. The plan followed by the DAC at Austin, Texas, will be presented in this report.

Following the development and printing of the instruments in the spring of 1977, the DAC at Austin began the mail survey in May. A Director Questionnaire and three or more Teacher Questionnaires were sent to each of the 139 Title VII basic projects within the central network service area. Directors were asked to complete the Director Questionnaire and to select a sample of teachers in the project, preferably at different grade levels, to complete the Teacher Questionnaires. Because the mail-out took place late in the school year, many teachers had no opportunity to complete the questionnaires. The return rate for responding projects was about 30%, with many project returns lacking teacher responses. In order to improve the response rate and ensure representative results, a follow-up effort was necessary.

The follow-up survey was conducted in September, 1977, and the process of coding the returned questionnaires began. By October 6th a substantial number of questionnaires from the follow-up had been received. All the questionnaires received by that date were coded and keypunched for data analysis.

Computer programming and data analysis were completed in December, 1977. Procedures and tables for presenting the data were developed at this time. In January, 1978, computer printout results were sent to directors of projects having returned four or more completed Teacher Questionnaires. During the fall of 1977, the DAC at Austin agreed to perform the data analysis on the questionnaire collected by the other two DACs. By January, 1978, coding and keypunching had begun on the questionnaires from the central area received after October 6, 1977, and on the questionnaires received from the DACs at Cambridge and Los Angeles. All keypunching was completed and the data were ready for analysis in February. Computer programming, data analysis, and table construction were completed in March, 1978.

Data Analysis

The analysis performed on the survey data used the computation facilities at the University of Texas at Austin and a Texas Instruments Silent 700 Electronic Data Terminal (teletypewriter) provided by the Education Service Center, Region XIII. The computation facilities at the University of Texas include a system of two major interfacing computers, Control Data Corporation (CDC) 6600 and 6400; remote job entry terminals; and input and output hardware. Software used for data analysis included EDIT, a text editor; FORTRAN, using an MNF compiler; the Statistical Package for the Social Sciences (SPSS) for statistical routines; and TAURUS, the interactive system for the UT-Control Data 6000 System (see References).

In the process of preparing for keypunching, the returned questionnaires had to be screened and coded. Some questionnaires were omitted from the data base because they lacked necessary identifying information, contained few or no responses, or were completed by an inappropriate respondent (e.g., teacher's aide). The questionnaires were coded in a manner intended to maximize the amount of useful information obtained from the responses. At the same time, however, some limitations were imposed on certain responses to restrict the amount of valid data. Only one non-English language and no more than five subject areas taught were coded for each Teacher Questionnaire. The number

of languages coded for each Director Questionnaire was limited to three. Where more than three were indicated, the three serving the most pupils were selected. For the two questions on needs for measurement instruments and instructional materials, the amount of data retained was limited to whatever could be coded on four data cards per question. The number of cases in which data were omitted because of these restrictions was quite small. After coding was completed the questionnaires were keypunched onto cards and machine verified. The data were entered into the permanent file system at the UT Computation Center where they were recorded on disk and magnetic tape, available for editing and programming. The data were edited to discover and correct keypunching or coding errors. The data from each DAC were entered into the permanent file system separately, and after editing they were consolidated into two files, one for director data and one for teacher data.

Computer programs already developed for the analysis of Austin DAC data were modified for use with the nationwide data. As analysis results were obtained, tables were constructed for presentation of the results. (Because the results were based on survey data, primarily descriptive statistics were calculated from the data.) To enhance the usefulness of the results, some of the reported results--such as needs for measurement instruments and instructional materials--include only the data obtained from projects using Spanish (representing about 80% of the data base). This restriction ensures that conclusions about the needs for the majority of the respondents, using the Spanish language, will not be confounded by the needs for the rest of the respondents using other languages.

Results

A total of 156 Director Questionnaires and 573 Teacher Questionnaires from the three DACs were received and used in the data analysis. Occasionally Teacher Questionnaires from a project were received without a usable Director Questionnaire, and, conversely, sometimes no usable Teacher Questionnaire accompanied a Director Questionnaire. As a result, the total number of projects represented in the results, 170, is greater than the number of responding directors. Most of the projects are represented by both director and teacher data, but a few are represented by director data only, and a few are represented by teacher data only.

The reader may wonder about the degree of accuracy of the results--how well the results represent the "real life situation." Since no two Title VII projects are exactly alike, the results derived from 170 different projects cannot precisely reflect the needs of individual projects. The purpose of this nationwide survey was to identify the extent and areas of needs of Title VII projects as a group in order to indicate service priorities and opportunities for bilingual network centers. Serving the particular needs of an individual project remains the responsibility of the individual network centers. The results reported herein, therefore, can be used to describe the combined needs of all basic Title VII projects, but not the needs of an individual project. The quantity of responses received from project directors

and teachers is large enough for the data to adequately represent Title VII projects as a whole. The reader should be cautioned, however, about applying results to specific instances because the results were derived from samples of directors and teachers. For example, although projects sampled report that exactly 100 Vietnamese-speaking students are being served, no one should conclude that only 100 Vietnamese speakers are actually being served across the nation.

The presentation of the results and accompanying discussion will generally follow the order of the items in the survey instruments. To help clarify interpretation of the data presented in the tables, examples of pertinent questionnaire items will be presented as figures within the discussion.

Respondent Characteristics

The geographic distributions of the responding directors and teachers and the reported number of students being served were broken down by the network service areas for the three types of network centers and by the language(s) used in the project. Figures 1, 2, and 3 are maps of the service areas for the Dissemination and Assessment Centers, Resource Centers, and Materials Development Centers, respectively. These maps are provided to assist the reader in understanding the geographical areas presented in the tables.

Table 1 and 2 show the distribution of the responding 156 directors and 573 teachers, respectively, among the network service areas. The distribution of the percentages across service areas is approximately the same for both directors and teachers, indicating that a

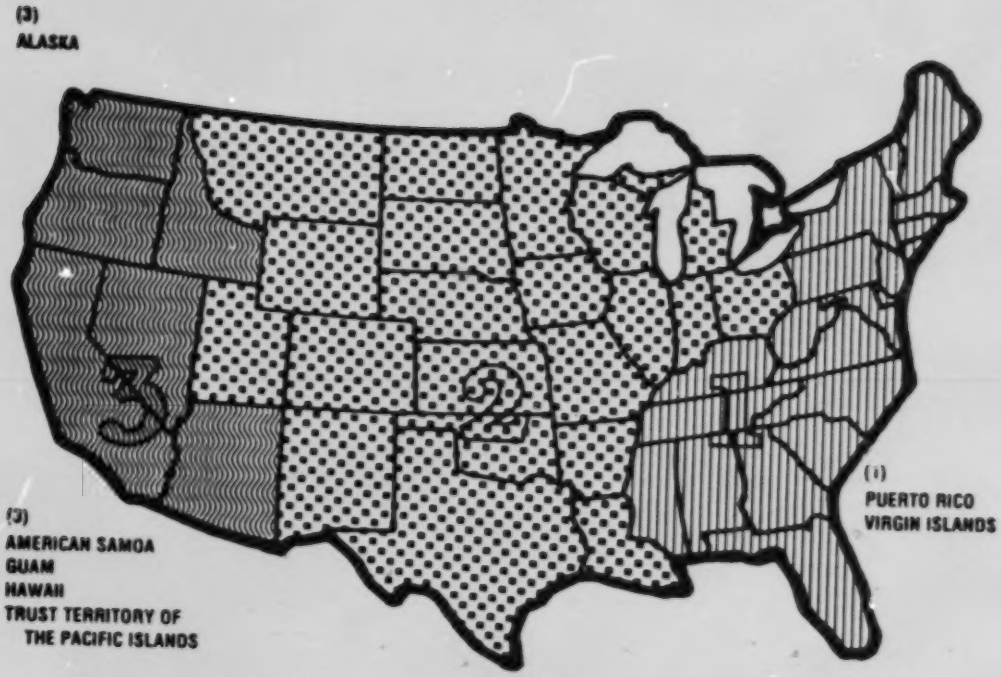

Figure 1. Service Areas for Dissemination and Assessment Centers

Figure 2. Service Areas for Resource Centers

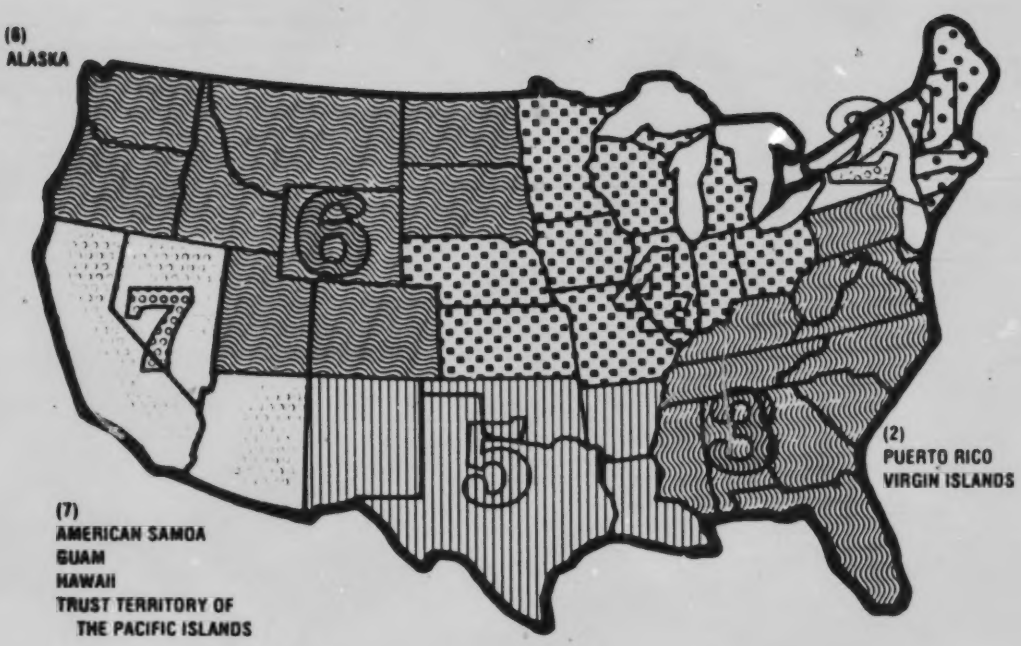

Figure 3. Service Areas for Materials Development Centers

Table 1

Distribution of Responding Directors among Network Centers by Service Areas

Network Service Area[a]	Frequency	Percentage
Dissemination and Assessment Centers		
Central	58	37.2
Eastern	23	14.7
Western	75	48.1
Total	156	100.0
Resource Centers		
1 (New England)	8	5.1
2 (New York)	12	7.7
3 (Southeast)	3	1.9
4 (Midwest)	4	2.6
5 (South Central)	47	30.1
6 (North Central)	7	4.5
7 (West)	70	44.9
8 (Northwest)	5	3.2
Total	156	100.0
Materials Development Centers		
1 (New England)	8	5.1
2 (New York)	12	7.7
3 (Southeast)	3	1.9
4 (Midwest)	6	3.8
5 (South Central)	47	30.1
6 (North)	10	6.4
7 (West)	70	44.9
Total	156	99.9[b]

[a]See Figures 1, 2, and 3 for maps of Network Service Areas.
[b]Sum differs from 100.0 because of rounding error.

Table 2

Distribution of Responding Teachers among Network Centers by Service Areas

Network Service Area[a]	Frequency	Percentage
Dissemination and Assessment Centers		
Central	245	42.8
Eastern	42	7.3
Western	286	49.9
Total	573	100.0
Resource Centers		
1 (New England)	14	2.4
2 (New York)	25	4.4
3 (Southeast)	3	.5
4 (Midwest)	13	2.3
5 (South Central)	215	37.5
6 (North Central)	17	3.0
7 (West)	265	46.2
8 (Northwest)	21	3.7
Total	573	100.0
Materials Development Centers		
1 (New England)	14	2.4
2 (New York)	25	4.4
3 (Southeast)	3	.5
4 (Midwest)	16	2.8
5 (South Central)	215	37.5
6 (North)	35	6.1
7 (West)	265	46.2
Total	573	99.9[b]

[a]See Figures 1, 2, and 3 for maps of Network Service Areas.
[b]Sum differs from 100.0 because of rounding error.

particular geographical area has the same proportion of representation in the data from directors as it does in the data from teachers. Nearly one-half of the responses received (from both directors and teachers) were from the western part of the nation, while about 40% of the responses came from the central area. Examination of the geographically smaller areas represented by Resource Center or Materials Development Center network service areas, reveals that Area 7, the western part of the United States, accounts for almost one-half (44.9%) of the responding directors and for nearly one-half (46.2%) of the responding teachers. Area 5, the south central and southwestern part of the nation provided nearly one-third (30.1%) of the responding directors and over one-third (37.5%) of the responding teachers. Taken together, these two adjacent southwestern areas are represented by three-fourths (75.0%) of the directors and by about five-sixths (83.7%) of the teachers. The large proportion of responses form these areas reflects the large proportion of the target population and of Title VII projects in these areas.

The low number of responses (three directors and three teachers) from Area 3, the Southeast, probably underrepresents the proportion of target population to be found there. The large number of non-Title VII bilingual programs in Florida may account for the low proportion of response from this area.

The geographic distribution of students being served as reported by the project directors, broken down by network center service areas, is contained in Tables 3, 4, and 5, in the row of totals at the bottom of each table. Since some responding directors failed to report the number of students in their projects, the figures in Tables 3, 4, and

Table 3

Distribution of Number of Students Reported by Responding Project Directors by Language across Dissemination and Assessment Center Network Service Areas

Language	Dissemination and Assessment Center Network Service Area			
	Central	Eastern	Western	Total
Spanish	40,600	4,339	20,419	65,358
French-Creole	1,449	60		1,509
Portuguese		829	149	978
Italian		263		263
Chinese-Cantonese			4,064	4,064
Philipino			2,163	2,163
Vietnamese			100	100
Japanese			53	53
Navajo	1,316		2,611	3,927
Choctaw	810			810
Crow	360			360
Hualapai			129	129
Keres				
Miccosukee	666			666
Korean			661	661
Russian			243	243
Marshallese			150	150
Ponapean			152	152
Samoan				
Apache	185			185
Nukuoran			22	22
Punjabi			49	49
Total	45,386	5,464	30,965	81,815

Note: The reported numbers of students in this table are far less than the actual numbers of students being served because not all project directors responded to the questionnaire or provided numbers of students information on the questionnaire.

Table 4

Distribution of Number of Students Reported by Responding Project Directors by Language across Resource Center Network Service Areas

Language	Resource Center Network Service Area								
	1	2	3	4	5	6	7	8	Total
Spanish	1,103	3,121	115	370	39,334	896	19,806	613	65,358
French-Creole		60			1,449				1,509
Portuguese	759	70					149		978
Italian		236							236
Chinese-Cantonese							4,064		4,064
Philipino							2,163		2,163
Vietnamese							100		100
Japanese							53		53
Navajo						1,316	2,611		3,927
Choctaw					810				810
Crow						360			360
Hualapai							129		129
Keres									
Miccosukee					666				666
Korean							661		661
Russian								243	243
Marshallese							150		150
Ponapean							152		152
Samoan									
Apache					185				185
Nukuoran							22		22
Punjabi							49		49
Total	1,862	3,487	115	370	42,444	2,572	30,109	856	81,815

Note: The reported numbers of students in this table are far less than the actual numbers of students being served because not all project directors responded to the questionnaire or provided numbers of students information on the questionnaire.

Table 5

Distribution of Number of Students Reported by Responding Project Directors by Language across Materials Development Center Network Service Areas

Language	Materials Development Center Network Service Area							
	1	2	3	4	5	6	7	Total
Spanish	1,103	3,121	115	805	39,334	1,074	19,806	65,538
French-Creole		60			1,449			1,509
Portuguese	759	70					149	948
Italian		236						236
Chinese-Cantonese							4,064	4,064
Philipino							2,163	2,163
Vietnamese							100	100
Japanese							53	53
Navajo						1,316	2,611	3,927
Choctaw					810			810
Crow						360		360
Hualapai							129	129
Keres								
Miccosukee					666			666
Korean							661	661
Russian						243		243
Marshallese							150	150
Ponapean							152	152
Samoan								
Apache					185			185
Nukuoran							22	22
Punjabi							49	49
Total	1,862	3,487	115	805	42,444	2,993	30,109	81,815

Note: The reported numbers of students in this table are far less than the actual numbers of students being served because not all project directors responded to the questionnaire or provided numbers of students information on the questionnaire.

5 underrepresent the actual number of students which could have been reported in this sample. One consequence of the omission of the number of students responses is illustrated by the distribution of students across DACs in Table 3. Although about one-half of the director and teacher responses originated in the western area, only about 38% of the total number of students were reported in this area. Concurrently, whereas roughly 40% of director and teacher responses were received from the central area, about 55% of the reported students were from this area. The difference between proportion of students, about 7%, and the proportions of directors and teachers for the eastern area is slight.

Once again, the greatest proportions of students were reported in RC and MDC Service Areas 5 (51.9%) and 7 (36.8%). The number of students reported for the combined southwestern areas is 72,553, or 88.7% of the total number reported.

Tables 3, 4, and 5 also show how the reported students are distributed according to the languages served by the projects and across network service areas. As expected, Spanish was the language reported for the most students, 79.9% of the total number. Of all the Spanish-speaking students represented in this sample, about 93% are found in the central and western areas, and about 90% are from RC and MDC Service Areas 5 and 7. The distributions of responding projects according to languages served, across network service areas are presented in Tables 6, 7, and 8. Note that some projects reported serving more than one language. Again, most of the projects are for Spanish speakers in the southwestern part of the United States. The

Table 6

Distribution of Responding Directors by Language(s) Used in Project across Dissemination and Assessment Center Network Service Areas

Language	Dissemination and Assessment Center Network Service Area			
	Central	Eastern	Western	Total
Spanish	51	18	63	132
French-Creole	2	1	0	3
Portuguese	0	6	4	10
Italian	0	5	0	5
Chinese-Cantonese	0	1	5	6
Philipino	0	0	6	6
Vietnamese	1	1	3	5
Japanese	0	0	1	1
Navajo	1	0	4	5
Choctaw	1	0	0	1
Crow	1	0	0	1
Hualapai	0	0	1	1
Keres	1	0	0	1
Miccosukee	1	0	0	1
Korean	0	0	1	1
Russian	0	0	1	1
Marshallese	0	0	1	1
Ponapean	0	0	1	1
Samoan	0	0	1	1
Apache	1	0	0	1
Nukuoran	0	0	1	1
Punjabi	0	0	1	1

Note: The reported numbers of projects in this table may be less than the actual number of projects because only questionnaire respondants are included in the data.
Note: A project may serve more than one language.

Table 7

Distribution of Responding Directors by Language(s) Used in Project across Resource Center Network Service Areas

Language	Resource Center Network Service Area								
	1	2	3	4	5	6	7	8	Total
Spanish	4	11	3	4	42	5	59	4	132
French-Creole	0	1	0	0	2	0	0	0	3
Portuguese	5	1	0	0	0	0	4	0	10
Italian	0	5	0	0	0	0	0	0	5
Chinese-Cantonese	0	1	0	0	0	0	5	1	7
Philipino	0	0	0	0	0	0	5	1	6
Vietnamese	0	0	1	0	1	0	2	0	4
Japanese	0	0	0	0	0	0	2	0	2
Navajo	0	0	0	0	0	1	4	0	5
Choctaw	0	0	0	0	1	0	0	0	1
Crow	0	0	0	0	0	1	0	0	1
Hualapai	0	0	0	0	0	0	1	0	1
Keres	0	0	0	0	1	0	0	0	1
Miccosukee	0	0	0	0	1	0	0	0	1
Korean	0	0	0	0	0	0	1	0	1
Russian	0	0	0	0	0	0	0	1	1
Marshallese	0	0	0	0	0	0	1	0	1
Ponapean	0	0	0	0	0	0	1	0	1
Samoan	0	0	0	0	0	0	0	1	1
Apache	0	0	0	0	1	0	0	0	1
Nukuoran	0	0	0	0	0	0	1	0	1
Punjabi	0	0	0	0	0	0	1	0	1

Note: The reported numbers of projects in this table may be less than the actual number of projects because only questionnaire respondants are included in the data.
Note: A project may serve more than one language.

Table 8

Distribution of Responding Directors by Language(s) Used in Project across Materials Development Center Network Service Areas

Language	Materials Development Center Network Service Area							
	1	2	3	4	5	6	7	Total
Spanish	4	11	3	6	42	7	59	132
French-Creole	0	1	0	0	2	0	0	3
Portuguese	5	1	0	0	0	0	4	10
Italian	0	5	0	0	0	0	0	5
Chinese-Cantonese	0	1	0	0	0	1	5	7
Philipino	0	0	0	0	0	1	5	6
Vietnamese	0	0	1	0	1	0	2	4
Japanese	0	0	0	0	0	0	2	2
Navajo	0	0	0	0	0	1	4	5
Choctaw	0	0	0	0	1	0	0	1
Crow	0	0	0	0	0	1	0	1
Hualapai	0	0	0	0	0	0	1	1
Keres	0	0	0	0	1	0	0	1
Miccosukee	0	0	0	0	1	0	0	1
Korean	0	0	0	0	0	0	1	1
Russian	0	0	0	0	0	1	0	1
Marshallese	0	0	0	0	0	0	1	1
Ponapean	0	0	0	0	0	0	1	1
Samoan	0	0	0	0	0	1	0	1
Apache	0	0	0	0	1	0	0	1
Nukuoran	0	0	0	0	0	0	1	1
Punjabi	0	0	0	0	0	0	1	1

Note: The reported numbers of projects in this table may be less than the actual number of projects because only questionnaire respondants are included in the data.
Note: A project may serve more than one language.

language distribution for responding teachers is shown in Table 9. The predominance of Spanish is seen again, with 88.1% of the teachers using Spanish.

The information presented in Tables 3 through 9 shows that the westernmost network centers serve the greatest diversity of languages, including Spanish and other European languages, Native American, Oriental, and Southern Pacific languages. The easternmost centers serve mainly European languages, while the central area centers serve European and Native American languages. The languages appearing in these results are those for which responses were received; they do not include all languages used in Title VII projects.

The distributions of reported Title VII projects and students according to grade level are given in Table 10 for all languages taken together and for Spanish speakers. About 60% of the students in the All Languages column are in levels K through 3, about 20% are in grades 4 through 6, and about 19% are in the higher grades, 7 through 12. The first grade has the highest percentage of students, 16.7%. The Spanish-speaking students are similarly distributed across grade levels. Levels K through 3 account for about 65% of the students, about 19% are in grades 4 through 6, and about 15% are in grades 7 through 12. Again, the greatest percentage of students is in the first grade, 17.9%. These distributions demonstrate that the sample is weighed at the lower grade levels, reflecting funding policies.

A rough indication of the emphasis placed on the various subject areas which are taught bilingually is provided in Table 11. The figures in this table were derived from teacher responses to item

Table 9

Distribution of Responding Teachers by Language Taught

Language	Frequency	Percentage
Spanish	502	88.1
French-Creole	12	2.1
Portuguese	12	2.1
Italian	2	.4
Chinese-Cantonese	6	1.1
Philipino	9	1.6
Vietnamese	1	.2
Navajo	6	1.1
Choctaw	6	1.1
Crow	5	.9
Hualapai	2	.4
Miccosukee	1	.2
Korean	3	.5
Marshallese	2	.4
Punjabi	1	.2
Total	570	100.4 [a]

[a] Total differs from 100.0 because of rounding error.

Table 10

Distribution of Reported Numbers of Projects and Students by Grade Level for All Languages and for Spanish

Grade	All Languages		Spanish	
	Projects	Students	Projects	Students
ECE	20	1,084	17	973
K	91	12,010	67	10,629
1	106	13,675	76	11,684
2	107	12,486	77	10,803
3	101	10,598	71	9,011
4	82	6,152	54	4,865
5	75	5,752	47	4,151
6	65	4,784	39	3,329
7	46	3,142	31	2,070
8	43	2,852	37	1,831
9	46	3,159	29	2,044
10	40	2,667	26	1,840
11	33	2,049	22	1,240
12	29	1,531	18	888
Total		81,941		65,358

Note: The reported numbers of projects in this table may be less than the actual number of projects because only questionnaire respondants are included in the data.
Note: The reported numbers of students in this table are far less than the actual numbers of students being served because not all project directors responded to the questionnaire or provided numbers of students information on the questionnaire.

Table 11

Classes Taught by Responding Teachers Crosstabulated by Grade Level and Subject Area

Grade Level	Subject Area								
	Language Arts	Math	Social Studies	Science	Fine Arts	Basic or Except.	Health or P.E.	Other or All	Total
ECE	52	27	11	5	7	9	5	10	126
K	151	80	50	30	27	13	11	25	387
1st	222	98	75	41	29	1	6	25	497
2nd	191	86	67	48	22	1	5	22	442
3rd	135	55	50	23	14	1	5	17	300
4th	116	49	39	24	11	1	5	18	263
5th	87	41	34	19	12	0	3	14	210
6th	74	34	26	18	8	0	4	9	173
7th	38	15	16	13	2	0	1	3	88
8th	35	12	14	14	2	0	0	4	81
9th	37	16	22	12	0	0	1	9	97
10th	26	8	27	8	0	0	2	11	82
11th	24	7	28	5	0	0	1	10	75
12th	25	7	21	3	0	0	1	10	67
Total	1,213	535	480	263	134	26	50	187	2,888

number 3 on the Teacher Questionnaire, which asked teachers to list subject areas they taught and the grade levels at which they taught them. Because some teachers have several different classes of students for the same subject area and grade level, some teachers teach several different subject areas to the same group of students, and some teachers may teach the same subject area to different classes at different grade levels, the data from this item only roughly indicate the number of classes taught at a particular subject area and grade level for this sample. The information provided in the Table 11 is perhaps best used as indicating relative emphasis between subject areas and/or grade levels. Language arts skills, for example, receive heavy teaching emphasis at all grade levels. The relative emphasis on language arts skills, however, declines at the high school level where social studies subjects receive about the same emphasis. The language arts skills category encompasses readiness work, reading, writing, composition, oral expression, general English and non-English language arts, etc. Thus the heavy emphasis on language arts is partly due to the number of basic skills encompassed by the term. At the elementary level, mathematics skills receive the second highest emphasis, followed by social studies and science. The emphasis on mathematics and the sciences declines at the upper grade levels.

The teaching experience data for 560 of the sampled teachers are presented in Tables 12 and 13. Table 12 shows years of experience from 0 to 40 years while Table 13 presents years 0 to 5 in greater detail. About half (51.3%) of the teachers sampled have five or fewer years of total teaching experience (see Table 12), about one-fourth (26.3%) have from six to ten years of experience, and about

Table 12

Distribution of Numbers of Teachers according to Years of Bilingual Teaching Experience and Years of Total Teaching Experience

Years	Taught Bilingual		Total Taught	
	Frequency	Percentage	Frequency	Percentage
0-5	508	90.7	287	51.3
6-10	47	8.4	147	26.3
11-15	3	.5	54	9.6
16-20	1	.2	37	6.6
21-25	1	.2	25	4.5
26-30			7	1.3
31-35			1	.2
36-40			2	.4
Total	560	100.0	560	100.2[a]

[a]Total differs from 100.0 because of rounding error.

Table 13

Distribution of Numbers of Teachers Having Five or Fewer Years of Bilingual or Total Teaching Experience

Years	Taught Bilingual		Total Taught	
	Frequency	Percentage	Frequency	Percentage
0	11	2.2	6	2.1
1	128	25.2	35	12.2
2	148	29.1	70	24.4
3	102	20.1	56	19.5
4	64	12.6	63	22.0
5	55	10.8	57	20.0
Total	508	100.0	287	100.2[a]

[a]Total differs from 100.0 because of rounding error.

one-fourth (22.4%) have more than ten years of experience. In contrast, for the same teachers, about 91% have five or fewer years of bilingual teaching experience. These figures indicate that few teachers have lengthy experience teaching bilingually. A closer examination of the distribution from 0 to 5 years of experience (Table 13) reveals that only 7.3% (41 of 560) of the teachers have two or fewer years of teaching experience, while 24.8% (139 of 560) of the teachers have two or fewer years of bilingual teaching experience. From this examination it appears that very few teachers are teaching bilingually without having previous non-bilingual teaching experience. Thus, while this sample of teachers may be relatively new to bilingual teaching, these teachers are not inexperienced in general teaching.

Instructional Equipment, Information Sources and Information Topics

The following sections present the results from the survey questions dealing with the availability and usefulness of various instructional equipment, the sources and usefulness of professional information received by directors and teachers, and the usefulness of, and extent to which information on a variety of pertinent topics had been received by directors and teachers.

The data gathered on instructional equipment is intended to provide information that would allow MDCs to anticipate the usability and usefulness of products they might consider developing that require equipment for implementation in a bilingual project. For example, the usabilty of a video tape module on multiplication facts would be severely limited if relatively few potential users (teachers) have access to video tape equipment. Furthermore, if teachers who have the necessary equipment consider this medium to have only limited usefulness, then this product is not likely to be widely used by even those teachers with the means to do so. If results show that most project teachers have access to thermofax and duplicating machines, then an MDC or DAC might decide to accompany materials with thermofax masters rather than ditto masters and thereby reduce production costs. Both directors and teachers were asked to respond to this question; because their roles differ and they use equipment in different contexts, their perceptions of the availability and usefulness of equipment may be different.

Teachers and directors were asked to indicate whether they had received information from each of eleven primary sources of information on bilingual education and to rate the importance of the information received from each source. In the event a survey respondent had received no information from a listed source, the respondent rated the

potential importance of such information. The data gathered on information sources is intended to provide a general picture of the effectiveness of current information distribution mechanisms in reaching the target clients and the extent to which the information products from various sources are useful to the clients. A comparison between the usefulness ratings given by information recipients and the potential usefulness ratings given by nonrecipients yields a rough index of the extent to which each information source lives up to the expectations of its clientele. Although these results can be viewed as primarily evaluative, they may also be useful in suggesting programmatic directions for the individual information sources. For instance, some MDCs publish a regular newsletter while others make no such attempt to systematically inform other bilingual educators of their activities. If information from MDCs is viewed as important by those that have received it, and potentially important by those that have not, then MDCs may determine that continuing or initiating such a product would be worthwhile.

In order to assess the availability and adequacy of information related to bilingual education, teachers and directors were asked to indicate whether they had or had not received information on each of seven general topic areas relevant to bilingual education. The value of information received on the individual topic areas was also evaluated. In the event no information on a listed topic had been received, the respondent judged the potential value of receiving such information. These results are intended to provide an overview of the adequacy and availability of existing information and inferential guidance to topical areas needing additional information development and/or more effective dissemination strategies. The operational implications of these findings for RC, DAC, and Clearinghouse activities must be

determined by the individual projects; these findings may, however, prove useful in reducing duplication of effort and in increasing the effectiveness of resource allocation for information services.

Interpreting the Results. Each of the three survey questions discussed in this section used a three point rating scale ranging from 1 (Not Useful, Not Important, or Not Valuable) to 3 (Very Useful, Very Important, or Very Valuable). The tables displaying the results of each question (two tables per question, one for director responses, one for teacher responses) contain the frequency of responses for rating scale options 2 and 3 (noted in the tables as f(2) and f(3); somewhat and very valuable, useful, or important, respectively) to each question item. The total number of respondents that answered each question item is presented in the columns headed "N Total." The reader will note that each table contains two sections displayed in this format. The left section of each table summarizes the results for the respondents that reported having the equipment or information described in the item. The right section of each table summarizes the results for the respondents that do not have the equipment or information described. Comparing the values in the "N Total" columns of the two sections yields the relative proportion of respondents that reported having and not having a particular item of equipment or information. The sum of these two values is the total number of respondents (directors or teachers) that answered the item.

A column headed "Median" may be found in each of the two sections for each of the tables discussed in this section. The values in this column are the median (average) ratings (of usefulness, importance, or value) given by respondents for a particular item. The medians in the

first section of a table are average ratings from respondents having the items, while the medians in the second sections are averages from respondents not having the items. The median represents the midpoint of the distribution of responses: Exactly one-half of the responses were higher values and one-half were lower than the median. Since the rating scale used for these questions has only three response options (1, 2, or 3), the range of medians is small; they differ by only a few tenths of a point from each other. A general rule of thumb the reader may use to decide whether one median is different enough from another to make a difference, is that a difference of .3 or more constitutes a noteworthy difference for project director results. Since the N for teachers is so much larger than for directors (573 teachers vs. 156 directors), a smaller difference between medians within the teacher results (about .2) is noteworthy.

The reader should note that differences in medians reflect shifts in proportion of respondent ratings. If responses were completely random, a median of 2.0 would be expected. Therefore the reader is advised to examine the proportion of respondents that selected each response option for a given item (the frequencies in the f(2) and f(3) columns). In this context the medians have the following meaning: Medians of 2.5 and higher indicate that at least half the respondents rated the item in question as very useful, valuable, or important (or potentially very useful, valuable, or important). This degree of consensus achieved on an extreme judgment, especially with a relatively large N (40 or more) is noteworthy in and of itself. As a final caution, the reader should note the N associated with any median of interest. The smaller the N, the less reliable (likely to be replicated if the

survey was repeated) the judgment represented by the resulting median. This caution is particularly important to observe when drawing inferences about differences between two or more medians. When one or more such median is calculated from Ns of less than 20, such inferences should be made with care. The larger the difference between medians, the smaller the N can be and still yield reasonably reliable conclusions.

The discussion of the survey results which follows does not attempt to note every possible trend and inference that can be made from the data. The reader is encouraged to examine the tables thoughtfully and in light of his/her program needs to determine which findings are of greatest potential import for the reader's purposes. Our discussion highlights the most obvious trends and discrepancies, but should not be viewed as a comprehensive and exhaustive analysis and interpretation of the results presented in the tables.

Instructional Equipment. Both directors and teachers were asked to rate the usefulness of various types of instructional equipment commonly used in bilingual programs. The survey question is reproduced in Figure 4. The respondent is instructed to rate the usefulness of each item of equipment in the first column if it is available to them, and in the second column if it is not available. A three point scale (1-Not Useful, 2-Somewhat Useful, and 3-Very Useful) was used for the ratings. The results for the directors are presented in Table 14. The results for the teachers are presented in Table 15.

The first part of Table 14 contains results for the cases where items of equipment were available; the second part of Table 14 contains results for cases where items of equipment were not available. The frequencies of responses for ratings 2 and 3 are provided so the reader may easily see the proportions of "Somewhat Useful" and "Very Useful" responses. The median is used to indicate the average response, rather

2a. If your project has any of the following equipment available, rate the usefulness of each item to your project by writing the number corresponding to your response, from the scale below, in the blank to the right of the item (first column).

2b. If your project does NOT have some of the equipment available, rate the usefulness of the items to your project IF THEY WERE AVAILABLE by writing the number corresponding to your response in the second column, below.

1-Not useful 2-Somewhat useful 3-Very useful

Equipment	Equipment IS Available	Equipment IS NOT Available
1 Language laboratory.....		
2 Tape recorder.....		
3 Record player.....		
4 Slide projector.....		
5 Film projector.....		
6 Film strip projector.....		
7 Overhead projector.....		
8 Opaque overhead projector...		
9 Television.....		
10 Duplicator.....		
11 Thermofax.....		
12 Video taperecorder.....		

Figure 4. Usefulness of Equipment (Director Question 2, Teacher Question 4)

Table 14

Directors' Ratings of Usefulness of Available Equipment and Potential Usefulness of Equipment Not Available

	Equipment	Equipment IS Available				Equipment IS NOT Available			
		f(2) Somewhat Useful	f(3) Very Useful	N Total	Median Usefulness	f(2) Somewhat Useful	f(3) Very Useful	N Total	Median Potential Usefulness
1	Language laboratory	9	29	41	2.8	26	54	107	2.5
2	Tape recorder	14	130	146	2.9	2	7	10	2.8
3	Record player	26	116	145	2.9	6	2	10	2.0
4	Slide projector	47	72	125	2.6	14	12	28	2.4
5	Film projector	40	88	132	2.8	9	11	22	2.5
6	Film strip projector	33	105	140	2.8	2	10	14	2.8
7	Overhead projector	56	64	135	2.4	8	6	19	2.1
8	Opaque overhead projector	57	34	106	2.2	22	15	50	2.0
9	Television	41	33	84	2.3	22	23	66	2.0
10	Duplicator	8	130	141	3.0	3	8	14	2.6
11	Thermofax	27	92	124	2.8	8	15	29	2.5
12	Video tape recorder	34	42	83	2.5	24	31	70	2.3

Note: Columns headed f(2) and f(3) contain the frequency of responses 2, Somewhat Useful, and 3, Very Useful, respectively.
Note: N is the total number of responses to the item, including 1, Not Useful, as well as 2 and 3.
Note: The calculation of the median also includes all response options.

than the mean, in order to better reflect the majority ratings by reducing the effects of the ratings given by the fewest respondents. The value for N in the "Equipment IS Available" part of the table is the number of directors, out of a possible total of 156, who responded to the item, indicating that it was available for use in their project. Similarly, the value for N in the "Equipment IS NOT Available" part shows how many directors indicated an item of equipment is not available for their use.

As a whole, most of the directors--more than half--lack only one item from the list of equipment, the language laboratory. Most of the items were rated as highly useful, with a median value of 2.8 or greater, including language laboratory, tape recorder, record player, film projector, film strip projector, duplicator, and thermofax. The items rated least useful are overhead projector, opaque overhead projector, and television, with medians below 2.5. These medians were, nevertheless, above 2.0, implying that, on the average, even the lowest rated items of equipment were more than "somewhat useful" to the directors.

Of the items of equipment which directors said they do not have available, the tape recorders and the film strip projector have the highest ratings of 2.8. It is interesting that one item, record player, is very highly rated by directors who have one available (Md=2.9, N=145), but is rated a median of 2.0 by the ten directors who do not have one available. Overall, the directors lacking items of equipment tend to rate the potential usefulness of those items lower than the directors who actually have the items available. This suggests that most directors have the equipment they feel they need the most.

The results of the teachers' responses to this question are presented in Table 15 in the same format as Table 14. The teachers'

Table 15

Teachers' Ratings of Usefulness of Available Equipment and Potential Usefulness of Equipment Not Available

Equipment	Equipment IS Available				Equipment IS NOT Available			
	f(2) Somewhat Useful	f(3) Very Useful	N Total	Median Usefulness	f(2) Somewhat Useful	f(3) Very Useful	N Total	Median Potential Usefulness
1 Language laboratory	30	117	156	2.8	98	174	353	2.5
2 Tape recorder	67	452	530	2.9	5	25	34	2.8
3 Record player	87	425	529	2.9	7	23	34	2.8
4 Slide projector	110	202	348	2.6	93	78	200	2.3
5 Film projector	92	351	463	2.8	28	57	95	2.7
6 Film strip projector	87	401	502	2.9	12	40	60	2.8
7 Overhead projector	192	228	461	2.5	34	46	96	2.4
8 Opaque overhead projector	170	126	347	2.2	76	61	190	2.1
9 Television	129	131	309	2.3	93	78	241	2.0
10 Duplicator	28	450	491	3.0	6	56	68	2.9
11 Thermofax	56	375	443	3.0	23	66	105	2.7
12 Video tape recorder	61	91	176	2.5	153	120	357	2.1

Note: Columns headed f(2) and f(3) contain the frequency of responses 2, Somewhat Useful, and 3, Very Useful, respectively.
Note: N is the total number of responses to the item, including 1, Not Useful, as well as 2 and 3.
Note: The calculation of the median also includes all response options.

judgments, based on 573 possible respondents, closely resemble those of the directors. Most of the teachers do not have a language laboratory or a video tape recorder. Teachers and directors generally agree on the most and least useful available equipment. However, there is less consistant agreement between teachers and administrators on the potential usefulness of equipment that is not available to them. Teachers who lacked items of equipment gave the highest ratings of potential usefulness to the tape recorder, record player (in clear conflict with project directors), film strip projector, and thermofax (Medians were 2.8 or higher.). Teachers tended to give overall higher ratings than directors for potential usefulness of items unavailable to them. Because this sample of teachers is so large, the results for this question should be very reliable; i.e., similar results would be obtained from a new sample of Title VII bilingual teachers.

Information Sources. Directors and teachers were next asked to rate the importance of information received from a list of sources (See Figure 5). They were also asked to rate the potential importance of receiving information from any of the sources from which they were not receiving information. The choices for three-point rating scale used for both instances are 1-Not Important at All, 2-Somewhat Important, and 3-Very Important. The results for the directors are presented in Table 16, and those for the teachers are in Table 17.

Of the 156 responding directors, more than two-thirds indicated they had received information from each of the sources listed with the exception of National Institute of Education (NIE) Centers (e.g. Southwest Lab, Northwest Lab, etc.). Less than one-third of the directors (N=47, 30%) had received information from NIE Centers,

5a. Please rate the importance of the information relevant to your project received from any of the sources listed below. Indicate your response by writing the number corresponding to your response in the blank to the right of the information source.

5b. If you are NOT receiving information from some of the sources listed. indicate the importance of such information to your project if it were available to you. Write the number corresponding to your response in the appropriate blanks below.

1--Not important at all 2--Somewhat important 3--Very important

Source	Information Received	Information NOT Received
1 Funding agency(ies)		
2 State Department of Education		
3 Materials Development Centers (Title VII)		
4 Resource Centers (Title VII)		
5 Dissemination and Assessment Centers (Title VII)		
6 Other bilingual project directors		
7 Commercial publishers		
8 Colleges and universities		
9 National Institute of Education (NIE) Centers		
10 U.S. Office of Education (USOE)		
11 U.S. Office of Bilingual Education (USOBE)		
12 Other--specify _____		

Figure 5. Importance of Information Received from Sources (Director Question 3, Teacher Question 5)

Table 16

Directors' Ratings of Importance of Information Received and Potential Importance of Information Not Received from Information Sources

	Information Source	Information Received				Information NOT Received			
		f(2) Somewhat Important	f(3) Very Important	N Total	Median Importance	f(2) Somewhat Important	f(3) Very Important	N Total	Median Potential Importance
1	Funding agency(ies)	29	103	134	2.9	4	15	19	2.9
2	State Department of Education	42	93	140	2.7	2	12	16	2.8
3	Materials Development Centers (Title VII)	39	62	115	2.6	7	33	42	2.9
4	Resource Centers (Title VII)	38	76	123	2.7	6	24	32	2.8
5	Dissemination and Assesssment Centers (Title VII)	44	64	123	2.5	6	26	33	2.9
6	Other bilingual project directors	42	63	110	2.6	12	29	45	2.7
7	Commercial publishers	84	48	147	2.2	3	3	8	2.2
8	Colleges and universities	53	47	119	2.3	14	19	37	2.5
9	National Institute of Education (NIE) Centers	21	7	47	1.7	50	44	103	2.3
10	U.S. Office of Education (USOE)	35	79	123	2.7	12	18	32	2.6
11	U.S. Office of Bilingual Education (USOBE)	23	99	128	2.9	8	20	28	2.8
12	Other--specify	2	11	13	2.9	1	4	6	2.8

Note: Columns headed f(2) and f(3) contain the frequency of responses 2, Somewhat Important, and 3, Very Important, respectively.
Note: N is the total number of responses to the item, including 1, Not Important at All, as well as 2 and 3.
Note: The calculation of the median also includes all response options.

and the median value of this information (1.7) was significantly lower than the median rating given for any other information source. The next lowest median rating (2.2) was given to commercial publishers. However, almost all of the directors (147) had received some information from publishers. Colleges and universities were similarly rated 2.3 by 119 directors. These three sources were also given the lowest ratings for potential importance by directors not receiving information from them. Funding agencies and USOBE were rated as providing the most important information to the directors (Md=2.9). Information received from the other sources was rated from 2.5 to 2.7 in importance. Directors who had not received information from these sources rated their potential importance highly.

For most sources, the potential importance rating was nearly the same as the importance rating by directors having received information. One exception, Title VII Dissemination and Assessment Centers, will be examined in more detail. According to Table 16, the importance of information from DAC's was rated 2.5 by the 123 directors receiving information from them and 2.9 ("very important") by the 33 directors not receiving information from them. This difference in rating appears to represent a discrepancy between expected importance and actual importance, which may be interpreted to mean that directors have high regard for information they expect to receive from DAC's, but the information actually received is less important than expected. Investigating further, responses from individual DAC service areas were examined, revealing differences between the DACs.

The median response from the 20 directors receiving information from the NDAC in the East is 2.59. The three directors not receiving information from NDAC had a median response of 2.80 for potential

importance. Although there is a discrepancy between actual and potential ratings, the number of directors not receiving information, three, is so small that the difference may be due to chance.

For the centrally located DACBE, 51 directors receiving information had a median response of 2.77, while 7 directors not receiving information had a median of 2.80. This does not represent a significant discrepancy since the number (and proportion) of directors not receiving information is small.

The NDAC at Los Angeles had 52 directors receiving information with a median rating of 2.15. The 23 directors not receiving information from this NDAC had a median potential rating of 2.90. For this area, the number of non-recipient directors is substantial enough for these results to be fairly reliable. There appears to be, therefore, a genuine discrepancy between the actual and potential ratings of importance of information received from NDAC at Los Angeles. The non-recipients expected that information from NDAC would be "very" important to them if they received it, but directors actually receiving information found it to be only "somewhat", rather than "very", important.

The proportions of directors who have and have not received information from the network centers is also of interest. Materials Development Centers appear to have provided information to about 73% of the directors, while about 27% have not been provided information. About four-fifths (79%) of the directors had received information from Resource Centers, but one-fifth (21%, $\underline{N}$=32) had not. The Dissemination and Assessment Centers had responses nearly the same as the Resource Centers. The Title VII network centers which, by the nature of their functions, should have the most contact with Title VII project directors, are RCs and DACs. The results reported above indicate that this is

indeed the case. The fact that about 20% of directors failed to receive information from RCs or DACs, however, indicates that these centers have not reached or served all their potential clients. However, the centers have reached a larger portion of potential clients than any other information source except commercial publishers. The high rating of the potential importance of information from these centers indicates that these unserved clients believe they could benefit from the centers.

Few (14%) of the 573 responding teachers reported having received information from NIE centers. The 83 teachers who had contact from NIE centers gave the information received the lowest median rating of importance given to any of the sources (Table 17). Relatively few teachers reported having received information from either USOE (N=129) or from USOBE (N=159). The median ratings of 2.5 and 2.6, respectively, show that information from these sources was relatively important. The source providing information to the most teachers (N=383) is commercial publishers; however, this information is judged as being of relatively low importance (Md=2.4). The information sources not mentioned so far received importance ratings of 2.6 or higher and had provided information to at least 39% (226 or more) of the teachers sampled.

The ratings of potential importance given by teachers who had not received information from each source were generally lower than the ratings by teachers who had received information from that source. The sources having nearly the same ratings for potential and actual importance are the Title VII network centers (MDC, RC, and DAC), USOBE, and NIE centers. The only substantial discrepancy between actual and potential ratings occurred for funding agency(ies) with median ratings of

Table 17

Teachers' Ratings of Importance of Information Received and Potential Importance of Information Not Received from Information Sources

	Information Source	Information Received				Information NOT Received			
		f(2) Somewhat Important	f(3) Very Important	N Total	Median Importance	f(2) Somewhat Important	f(3) Very Important	N Total	Median Potential Importance
1	Funding agency(ies)	70	199	283	2.8	98	93	223	2.2
2	State Department of Education	105	161	284	2.6	108	102	229	2.4
3	Materials Development Centers (Title VII)	81	237	329	2.8	45	129	190	2.8
4	Resource Centers (Title VII)	76	254	340	2.8	52	118	187	2.7
5	Dissemination and Assessment Centers (Title VII)	92	169	278	2.7	83	129	235	2.6
6	Other bilingual project directors	89	126	226	2.6	119	125	290	2.3
7	Commercial publishers	196	165	383	2.4	84	47	155	2.1
8	Colleges and universities	117	170	316	2.6	102	68	207	2.2
9	National Institute of Education (NIE) Centers	36	23	83	2.0	233	104	404	2.1
10	U.S. Office of Education (USOE)	47	65	129	2.5	200	108	369	2.1
11	U.S. Office of Bilingual Education (USOBE)	57	89	159	2.6	130	167	338	2.5
12	Other--specify	7	24	33	2.8	14	17	46	2.1

Note: Columns headed f(2) and f(3) contain the frequency of responses 2, Somewhat Important, and 3, Very Important, respectively.
Note: N is the total number of responses to the item, including 1, Not Important at All, as well as 2 and 3.
Note: The calculation of the median also includes all response options.

2.8 from recipients and of 2.2 from non-recipients. The results seem to reveal a tendency for teachers to feel that the potential of information not received is of less importance than that of information already received. They doubt what they have not seen. Teachers do, however, expect important information from Title VII network centers.

Again, a substantial proportion of teachers indicated they had not received information from Title VII network centers. Of the 573 teachers sampled, about 33% had received no information from MDCs or RCs while around 41% had none from DACs. These results indicate that at least one-third of Title VII project teachers may not have direct contacts with network centers and/or have not received services from them. Some or most of these teachers, however, may indirectly benefit from the centers through their project directors or other staff members.

Information Topics. The value of having information on various topics was assessed by the next question (see Figure 6). Directors and teachers were instructed to rate the value of having information on each of the topics listed, whether or not they had actually received any information. Again a three-point rating scale with the following choices was used: 1-Not Valuable, 2-Somewhat Valuable, 3-Very Valuable. The results for the responding directors are presented in Table 18 and those for the responding teachers in Table 19.

Examination of the first part of Table 18 reveals that the higher median ratings were given to those topics for which information was received by the largest proportions of directors. Almost all of the respondents (94%) had information on conferences/meetings/workshops concerning bilingual education, and this information was valued the highest with a median of 2.9. Large proportions of directors also

6. Rate the value of having information on the topics listed below. If you have already received information on some of the topics, please indicate this by responding in the first column. If you have NOT received information on some of the topics, respond in the second column. Indicate your response by writing the number corresponding to your choice from the following scale:

1--Not valuable 2--Somewhat valuable 3--Very valuable

Topic	Have Received Information	Have NOT Received Information
1 Other bilingual projects		
2 Bilingual instructional materials		
3 Bilingual education research		
4 Conferences/meetings/workshops concerning bilingual education		
5 Teacher/staff development and training programs		
6 Design of bilingual curriculum		
7 Evaluation of bilingual projects		
8 Other--specify _____		

Figure 6. Value of Information Received on Topics (Director Question 4, Teacher Question 6)

Table 18

Directors' Ratings of Value of Information Received and Potential Value of Information Not Received on Information Topics

	Information Topic	Have Received Information				Have NOT Received Information			
		f(2) Somewhat Valuable	f(3) Very Valuable	N Total	Median Value	f(2) Somewhat Valuable	f(3) Very Valuable	N Total	Median Potential Value
1	Other bilingual projects	45	56	105	2.6	11	36	50	2.8
2	Bilingual instructional materials	44	86	136	2.7	4	14	18	2.9
3	Bilingual education research	38	40	81	2.5	13	59	74	2.9
4	Conferences/meetings/workshops concerning bilingual education	30	113	146	2.9	0	8	9	2.9
5	Teacher/staff development and training programs	36	83	124	2.8	5	26	32	2.9
6	Design of bilingual curriculum	35	32	74	2.4	13	67	82	2.9
7	Evaluation of bilingual projects	32	36	73	2.5	14	63	80	2.9
8	Other--specify	0	4	5	2.9	0	1	1	3.0

Note: Columns headed f(2) and f(3) contain the frequency of responses 2, Somewhat Valuable, and 3, Very Valuable, respectively.
Note: N is the total number of responses to the item, including 1, Not Valuable, as well as 2 and 3.
Note: The calculation of the median also includes all response options.

received information about bilingual instructional materials (87%) with a median rating of 2.7, and teacher/staff development training programs (79%) with a rating of 2.8. About 67% of the directors received information about other bilingual projects, rated at a median of 2.6. For the other topics listed (bilingual education research, evaluation of bilingual projects, and design of bilingual curriculum), information was received by only about half of the respondents. The value of the information they received yielded median ratings of 2.5, 2.5, and 2.4, respectively.

Those directors not having received information on the particular topic areas gave very high ratings (2.8 and 2.9) to the importance of receiving such information. They expected that information on all of the topics would be very valuable to them. Comparing these high expectations to actual ratings, noticeable contrasts are found for three topics: Bilingual education research, evaluation of bilingual projects, and design of bilingual curriculum. These are also the topics for which relatively few (about half) directors have received information. The contrasts between actual and expected value of information on these topics indicate that better quality information and better distribution of information on these topics would be of great value to directors. There is a substantial need for high quality information on curriculum design, research and evaluation; existing information appears to be of disappointing quality. An effective information dissemination mechanism is also needed.

The results for the responding teachers (Table 19) are similar to those of the directors. The three topics for which information was received by large proportions of teachers and for which the highest value ratings were given were conferences/meetings/workshops concerning

Table 19

Teachers' Ratings of Value of Information Received and Potential Value of Information Not Received on Information Topics

	Information Topic	Have Received Information				Have NOT Received Information			
		f(2) Somewhat Valuable	f(3) Very Valuable	N Total	Median Value	f(2) Somewhat Valuable	f(3) Very Valuable	N Total	Median Potential Value
1	Other bilingual projects	129	166	317	2.5	87	124	238	2.5
2	Bilingual instructional materials	90	383	491	2.9	9	56	69	2.9
3	Bilingual education research	105	160	280	2.6	76	161	267	2.7
4	Conferences/meetings/workshops concerning bilingual education	92	418	526	2.9	5	29	35	2.9
5	Teacher/staff development and training programs	93	373	489	2.8	14	52	70	2.8
6	Design of bilingual curriculum	94	246	362	2.8	51	116	178	2.7
7	Evaluation of bilingual projects	111	170	309	2.6	82	143	238	2.7
8	Other--specify	1	6	9	2.8	2	7	14	1.5

Note: Columns headed f(2) and f(3) contain the frequency of responses 2, Somewhat Valuable, and 3, Very Valuable, respectively.
Note: N is the total number of responses to the item, including 1, Not Valuable, as well as 2 and 3.
Note: The calculation of the median also includes all response options.

bilingual education (92%, Md=2.9), bilingual instructional materials (86%, Md=2.9), and teacher/staff development and training programs (87%, Md=2.8). A larger proportion of teachers than directors said they had received information on design of bilingual curriculum (63%); and teachers rated this information as very valuable to them (Md=2.8, compared to the directors rating of 2.4). Available information on curriculum design may be adequate for teachers' purposes but not for project directors'. About half the teachers had received information on the remaining three topics, with the following proportions and ratings: Evaluation of bilingual projects, 54%, Md=2.6; other bilingual projects, 55%, Md=2.5; bilingual education research, 49%, Md=2.6. In general, the ratings provided by the teachers having received information agree with those of the directors.

Teachers who had not received information on these topics gave high ratings of 2.7 to 2.9 for the potential value of such information, with one exception. The potential value of information on other bilingual projects was rated at 2.5, the same rating given by teachers who had received such information. Directors lacking information on other projects placed greater potential value, 2.8, on it. Overall, non-recipient teachers gave slightly lower potential usefulness ratings than did non-recipient directors.

In general, these findings suggest that some existing information distribution systems fail to reach relatively large segments of bilingual education professionals with information of anticipated utility. Much of what reaches practitioners is less valuable and useful than anticipated, especially information on research, evaluation, and curriculum design at the project administrators' level. As noted in this discussion, regional variations occur, making the reported findings of greater use

in describing general trends rather than in making specific inferences about any particular population subgroup not treated separately in this report.

Training Needs for Teachers, Paraprofessionals and Administrators

The discussion that follows presents the results from the survey questions dealing with the need for training for teachers, paraprofessionals and administrators. Since one primary function of network centers (particularly RCs) is to provide staff development activities for project personnel, a considerable portion of the data gathering activities represented by this survey focused on attempting to determine the extent of training needs and the specific areas in which training is most needed.

The development of the survey questions designed to assess training needs involved the collection of a very large number of training topics from RCs, LEAs, colleges and universities and intermediate LEAs such as Education Service Centers and teacher centers across the country. Our intention was to present the survey respondents with a shopping list of training areas that represented the most commonly offered and requested training activities. Accordingly, we (DACBE at Austin) requested lists of all workshop and conference topics sponsored by each RC during the 1976-77 school year. We also surveyed the titles of courses offered by 639 colleges and universities designed to prepare or retrain personnel to serve the needs of LESA students. The data on course offerings was obtained from the National Center for Education Statistics October, 1975 survey of IHEs.

The resulting listing of several hundred course and workshop titles was sorted into three groups according to the intended audience of the workshop or course: Teachers, administrators and paraprofessionals. The

topics for each audience were then sorted to reduce the total number of topics to a manageable number. This sorting process focused on grouping similar titles together. Once the sorting was completed, the titles in each resulting group were reexamined to develop a generic description of the group. These generic descriptions were then listed in the instruments as "Training Areas". In this way three sets of training areas were developed, one each for teachers, paraprofessionals and administrators.

In addition to identifying the areas of greatest need for staff development we wanted to identify some of the most prevalent problems in obtaining needed training. A telephone survey was conducted of several RCs and LEAs to determine what problems they encountered in attempting to meet training needs. This informal survey resulted in identification of eight general problems in providing training.

The list of training areas for each category of project personnel and the identified problem areas were synthesized into survey questions in matrix form with the training areas on the vertical axis and the problem areas on the horizontal axis. The resulting questions, one each for teacher training, paraprofessional training and administrator training, are displayed in Figures 7, 8 and 9 respectively.

Survey respondents were asked to rate their need for training for each area employing a three point rating scale (1-No Need, 2-Some Need, 3-Great Need). Respondents were then asked to check which problems they had encountered in attempting to meet their need for training in the respective areas. Respondents were to check problems only if they had

indicated at least some need for training in that area. Project directors were asked to rate the need for training for all three staff categories. Teachers were asked to rate the training needs for teachers and paraprofessionals only; they were not asked to respond to the administrator training question.

Interpreting the results. Each of the training need questions used the same three point scale to report level of need. The five tables displaying the results of each question (two tables each for teacher training and paraprofessional training needs and one table for administrator training needs) contain the frequency of responses for rating scale options 2 and 3 (f(2) and f(3); some need and great need) for each training area. The total number of respondents that answered each item is presented in the column headed "N Total". A column headed "Median" is presented in each table. The values in these columns are the median (average) ratings of training need expressed by the respondents for that particular training area. The reader will recall that the median represents the midpoint of the distribution of responses. Exactly one-half of the responses were higher and one-half were lower than the median. Because the range of the rating scale is small, the differences between medians are small. Once again the reader will be faced with deciding when one median is sufficiently different from another to conclude that a real difference exists in training need between two or more training areas. A general rule to use in making such judgments is that a difference between medians of .3 or more is a real difference for medians obtained from project director judgments. Since the N for

teachers' judgments is much larger than that for project directors (573 teachers vs. 156 directors) a smaller difference between medians within teacher judgments (about .2) is a real difference.

The median values displayed in the tables that follow have intrinsic meaning in addition to their utility for making comparative evaluations. Since a completely random set of responses to the three point scale used in these items would yield median values of 2.0, any median that exceeds 2.0 by .2 or more is indicative of a real training need. Likewise, any median of 2.1 or less may be interpreted as indicating a low level of training need. This generalization should be tempered with a caution: Respondents tend to rate <u>their own</u> training needs lower than they rate the training needs of others. Thus, project directors report a generally greater need for teacher training than do teachers themselves. Project directors likewise judge the overall need for administrator training as somewhat lower than would teachers. This phenomena is discussed at greater length at the end of the narrative section that follows. It is important that the reader interpret the results presented below on the basis of the magnitude of reported need in light of the data source.

In addition to the section of the tables reporting the relative need for each area of training a section of each table is devoted to the problems encountered in obtaining needed training. The numbers that appear in the right hand section of these tables are the number of times the problem (specified in the vertical column) was reported as being responsible for difficulties in obtaining the needed training described in the horizontal row (training area). These frequencies should be examined as they relate to each training area (horizontally) to determine

the problem(s) most often encountered in meeting training needs in the specific area. The magnitude of the numbers in relation to each other will give the reader a general feel for the unique difficulties encountered in obtaining training for each area. The horizontal columns (one for each problem) can be examined separately to determine which training areas is most susceptible to each problem area. The bottom row of each table presents the column totals so the general prevalence of each problem area compared to the others may be seen.

We do not provide a general rule to determine when one problem is enough greater than another to conclude that it is significantly greater. This is because such judgments may need to be made between problems within a training area, between training areas within a problem, or simply between problems. Since the variety of potential judgments is so great, no one rule or strategy adequately addresses them all. One approach the reader may take is to ask "Do I think that a sufficiently greater number of people identified problem A than problem B to be comfortable in concluding that A is really a greater problem than is B for this training need?" A more quantitative and systematic approach is to calculate the magnitude of B in terms of A: That is, to compute the percentage of A represented by B. This approach would yield percentages; e.g., problem B is checked 75% as often as is A. A third method of determining the relative magnitude of each problem is to calculate the portion of all problems mentioned in connection with a training area that is represented by each problem. This procedure would yield; eg, problem A represents 45% of all the reported problems in meeting the

training need for training area X; problem B represents only 23%. Each of these methods may be useful in interpreting the data on the following tables. Nevertheless, the reader must still judge how much difference makes a difference for the purposes of that reader. One final caution is when interpreting percentages derived from this data, keep the frequencies represented by the percentages in mind. One would draw much different conclusions from "B is checked 75% as often as A" if A is checked 100 times and B, 75 times, than one would draw if A is checked 4 times and B, 3 times. B represents the same proportion of A in both instances, but only in the former instance is there enough real difference to make a difference.

Teacher Training. The purpose of question 5 on the Director Questionnaire, and question 7 on the Teacher Questionnaire was to collect information about needs for teacher training (see Figure 7). From a list of 26 training areas, respondents were asked to show to what extent teacher training was needed for each of the areas by using the following rating scale: 1-No Need, 2-Some Need, 3-Great Need. For each area in which at least some need for training was indicated, respondents were asked to check, from a list of possible problem areas, which problems were encountered in attempting to satisfy the training need.

The information obtained from the responses to this item includes: (1) Identification of training areas frequently chosen by respondents, (2) the relative magnitude of the training need for each area, (3) identification of the problems that most often hinder or prevent meeting training needs for each area. Such information may be useful to Resource

7a. Below is a list of areas for teacher training. Please rate your need for teacher training in these areas by referring to the scale below and writing the appropriate number in the "Extent of Need" column.

1-No need 2-Some need 3-Great need

7b. If you have indicated needs for teacher training in some of the areas listed below (left), please check in the appropriate columns below the problem areas encountered in meeting these needs.

Training Areas \ List of Problems	Extent of Need	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Materials selection										
2 Evaluating bilingual materials										
3 Adapting materials for bilingual classes										
4 Developing teacher-made materials										
5 Writing instructional objectives										
6 Developing criterion-referenced test										
7 Evaluating student performance										
8 Student selection and placement										
9 Diagnosing learning problems										
10 Testing for language dominance										
11 Language ability testing										
12 Bilingual teaching strategies										
13 Individualized instruction										
14 Team teaching										
15 Using paraprofessionals										
16 Teaching reading in the bilingual program										
17 Teaching the content areas in the bilingual program										
18 Early childhood education for bilingual children										
19 Affective learning in the bilingual program										
20 Classroom management and discipline										
21 Facilitating parent involvement										
22 Using community resources										
23 Coordinating the bilingual program with the overall school curriculum										
24 Evaluating the bilingual project										
25 Disseminating information about the program to parents, other teachers, other projects, etc										
26 Bilingual laws and legislation										
27 Other -- specify _____										

Figure 7. Teacher Training Needs and Problems (Director Question 5, Teacher Question 7)

Centers as a guide for establishing priorities for training activities and for suggesting strategies to overcome frequently encountered obstacles to delivering that training. Materials Development Centers, Dissemination and Assessment Centers, and the Clearinghouse may also use this information for making decisions concerning developing and disseminating training materials and providing professional resource referrals for particular specialty areas. Local projects may also use this information in planning inservice training. Finally, prospective teacher trainers may identify areas which would prove most fruitful for professional specialization.

The results for the directors' responses to this item are presented in Table 20, and those for the teachers, in Table 21. The first part of each table presents responses reflecting the extent of need for training in each of the training areas. The first column (headed f(2), Some Need) contains the frequency of responses of scale ratings of 2 to each training area. The second column (f(3), Great Need) contains the frequency of response ratings of 3 to each area. Entries in the "N Total" column are the numbers of teachers or directors that responded to the item with ratings of 1, 2, and 3. The medians in the fourth column were calculated from all three response options, with missing data excluded. The results for the extent of need part of the question are presented in this detail in order to allow the reader to interpret the results in several different ways. For example, rather than using the median as the sole measure of need for training, the reader can examine the proportion of respondents indicating "great need" or the sum of "great need" and "some need".

Table 20

Director Ratings of Needs for Teacher Training

Training Areas	Extent of Need				Response Frequencies to Problems								
	f(2) Some Need	f(3) Great Need	N Total	Median	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of Funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Materials selection	76	51	154	2.2	24	7	31	17	24	17	33	9	7
2 Evaluating bilingual materials	67	60	152	2.3	31	8	24	16	13	18	32	11	6
3 Adapting materials for bilingual classes	48	86	152	2.6	34	9	26	19	12	16	36	8	5
4 Developing teacher-made materials	51	78	152	2.5	16	15	8	9	23	18	46	11	5
5 Writing instructional objectives	64	45	153	2.0	16	10	13	4	13	14	29	22	4
6 Developing criterion-referenced test	49	64	155	2.2	31	6	17	7	19	12	32	11	1
7 Evaluating student performance	43	71	151	2.4	25	12	14	9	10	9	17	4	7
8 Student selection and placement	45	54	151	2.0	14	5	13	4	7	13	15	6	7
9 Diagnosing learning problems	52	83	154	2.6	37	17	24	7	12	10	22	4	6
10 Testing for language dominance	44	65	151	2.3	18	8	16	13	16	7	16	5	12
11 Language ability testing	60	70	152	2.4	35	9	25	17	15	9	16	3	6
12 Bilingual teaching strategies	51	85	153	2.6	33	26	13	7	8	18	27	7	5
13 Individualized instruction	56	63	151	2.3	25	14	9	2	15	11	18	12	9
14 Team teaching	58	44	150	2.0	27	7	11	2	8	8	15	15	3
15 Using paraprofessionals	54	54	152	2.1	27	5	10	3	17	14	15	8	3
16 Teaching reading in the bilingual program	45	85	153	2.6	27	18	18	9	15	12	22	7	8
17 Teaching the content areas in the bilingual program	47	89	154	2.6	36	14	19	11	10	20	24	7	9

Table 20 (Continued)

Director Ratings of Needs for Teacher Training

Training Areas	Extent of Need				Response Frequencies to Problems								
	f(2) Some Need	f(3) Great Need	N Total	Median	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of Funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
18 Early childhood education for bilingual children	49	43	147	1.9	18	8	12	6	10	8	13	9	6
19 Affective learning in the bilingual program	66	62	153	2.3	36	8	19	9	11	11	19	11	8
20 Classroom management and discipline	70	41	151	2.0	27	11	13	3	7	6	14	4	8
21 Facilitating parent involvement	58	80	153	2.5	32	6	15	4	15	24	20	21	9
22 Using community resources	57	61	151	2.2	23	6	11	5	11	15	17	13	7
23 Coordinating the bilingual program with the overall school curriculum	46	85	154	2.6	28	10	18	13	13	24	19	17	4
24 Evaluating the bilingual project	56	57	153	2.2	23	13	12	6	16	11	10	7	9
25 Disseminating information about the program to parents, other teachers, other projects, etc.	69	38	151	2.0	10	10	5	1	18	7	13	10	7
26 Bilingual laws and legislation	60	45	151	2.0	11	8	5	1	10	14	14	11	8
27 Other-- specify	1	6	7	3.0	5	0	2	2	1	0	2	1	1
Total					669	270	403	206	349	346	556	254	170

Note: Columns f(2) and f(3) contain frequencies of the responses 2, Some Need, and 3, Great Need, respectively.

Note: The N values are the total number of responses including 1, No Need, as well as responses 2 and 3.

Note: The Medians are calculated from all three possible responses.

The second part of each table presents the response frequencies to each item in the list of problems for each training area. Respondents were free check more than one problem, if applicable, and they were asked to indicate problems encountered only for areas in which they had indicated a need for training. The bottom row in each table contains the total number of times each problem received a response. These totals show which problems are most frequently encountered in attempting to meet training needs, across all training areas.

The following discussion of the results displayed on Table 20 focuses on those teacher training areas that project directors judged to be the most needed (Md=2.5 or greater). The reader should note that a median of this magnitude indicates that at least half the directors rated the need for training in these areas as "great". Since the need for training in these areas is perceived by such a large proportion of directors, the following discussion also touches on the problems associated with meeting these high need areas.

Adapting materials for bilingual classes (item 3) has an extent of need median of 2.6 with 55% of (156 possible) directors indicating great need for teacher training in that area. The problems encountered most often are lack of release time, trainers unidentified, and training materials unidentified. Developing teacher-made materials (item 4) received a median of 2.5. The problem lack of release time received a large number of responses (46), followed by lack of funds (23 responses). Directors apparently feel that teachers could benefit from training in developing and adapting materials, but that the biggest problem in acquiring such training is lack of release time.

Diagnosing learning problems (item 9) with a median of 2.6 is also a training area of high need. The main problem encountered in meeting this need is unidentified trainers; secondary problems are unidentified training materials and, again, lack of release time.

Bilingual teaching strategies (item 12), teaching reading in the bilingual program (item 16), and teaching the content areas in the bilingual program (item 17) are all areas concerned with teaching methodology specific to the bilingual setting. Directors indicated a great deal of need for teacher training in these areas (Md=2.6). Over half (54 to 57%) of all directors expressed "great" need for teacher training in these areas. The problems associated with bilingual teaching strategies are unidentified trainers, schedule conflicts, and trainers known but not available. The problems for teaching reading and content areas in the bilingual program are unidentified trainers and lack of release time.

Facilitating parental involvement (item 21) has an extent of need median of 2.5, with trainers unidentified and schedule conflicts as the most frequent problems. Lack of interest and lack of release time were also frequently checked as problems encountered in meeting this need. Since parental involvement is recognized as a universal goal and problem in education, in an innovative bilingual program, training in facilitating parental involvement is understandably important.

Coordinating the bilingual program with the overall school curriculum (item 23) is also a high need area with a median of 2.6. Associated problems are unidentified trainers and schedule conflicts.

The problem most often encountered by project directors in attempting to provide teacher training in the preceeding high need areas is unidentified trainers. Lack of release time is the next most frequent problem. When the responses to the problems for all the training areas are considered (see the bottom row of Table 20), unidentified trainers and lack of release time retain their predominance (f=669 and 556, respectively). Identifying trainers for high need areas is apparently a much needed and worthwhile service that can be undertaken by bilingual network centers. Providing sufficient release time for teachers to receive training is a problem that must be dealt with at the local level, but network centers could help by coordinating closely with LEAs and by demonstrating the value of the training they offer. Other problems receiving a large number of responses are unidentified training materials, lack of funds, and schedule conflicts.

The teachers' perceptions of teacher-training needs (see Table 21) are similar to the directors'. The seven training areas having the highest extent of need medians of (2.4 and 2.5) and the problems encountered in meeting these needs are discussed here. For each of these training areas, at least 242 or 42% of a possible 573 teachers rated their need for training in these areas as "great." These training areas are the same ones discussed for the directors' with the exception of facilitating parental involvement. Teachers felt there was "some" need for training in this area (Md=2.2) while project directors felt the need to be "great" (Md=2.5).

Adapting materials for bilingual classes (item 3) and developing

Table 21

Teacher Ratings of Needs for Teacher Training

Training Areas	Extent of Need				Response Frequencies to Problems								
	f(2) Some Need	f(3) Great Need	Total	Median	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of Funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Materials selection	211	239	541	2.3	77	24	81	45	93	43	119	16	22
2 Evaluating bilingual materials	206	232	530	2.3	76	28	67	30	33	45	122	22	16
3 Adapting materials for bilingual classes	173	272	533	2.5	84	29	68	39	59	42	119	13	14
4 Developing teacher-made materials	168	275	535	2.5	61	20	38	23	57	59	197	16	13
5 Writing instructional objectives	191	136	528	1.8	35	22	24	9	19	35	95	34	13
6 Developing criterion-referenced test	200	182	513	2.1	72	30	47	26	31	30	92	21	13
7 Evaluating student performance	175	183	521	2.1	54	18	49	19	16	27	59	11	12
8 Student selection and placement	168	165	513	2.0	51	18	35	21	13	36	44	16	19
9 Diagnosing learning problems	180	246	517	2.4	94	39	54	23	28	38	53	16	14
10 Testing for language dominance	156	174	513	2.0	49	29	38	25	14	35	50	10	15
11 Language ability testing	171	190	508	2.1	65	36	50	30	15	28	44	9	14
12 Bilingual teaching strategies	207	242	534	2.4	78	53	48	21	19	42	87	9	13
13 Individualized instruction	203	184	528	2.1	62	31	32	25	28	40	74	19	14
14 Team teaching	184	122	512	1.8	62	19	23	8	19	41	47	44	13
15 Using paraprofessionals	167	165	513	2.0	59	19	28	7	51	30	42	10	17
16 Teaching reading in the bilingual program	165	250	522	2.4	74	55	55	27	30	47	59	9	21
17 Teaching the content areas in the bilingual program	175	245	521	2.4	80	49	47	34	19	41	52	14	24

Table 21 (Continued)

Teacher Ratings of Needs for Teacher Training

Training Areas	Extent of Need				Response Frequencies to Problems								
	f(2) Some Need	f(3) Great Need	N Total	Median	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of Funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
18 Early childhood education for bilingual children	155	179	498	2.0	76	24	30	11	24	23	34	23	13
19 Affective learning in the bilingual program	187	203	507	2.2	77	28	55	16	18	28	44	19	18
20 Classroom management and discipline	155	149	519	1.8	52	24	27	12	14	26	39	19	15
21 Facilitating parent involvement	205	205	526	2.2	70	16	42	15	20	48	64	75	10
22 Using community resources	213	184	521	2.1	64	19	35	11	24	41	56	44	11
23 Coordinating the bilingual program with the overall school curriculum	151	260	525	2.5	75	23	41	17	20	61	63	39	13
24 Evaluating the bilingual project	186	191	509	2.2	63	25	29	10	19	23	54	14	16
25 Disseminating information about the program to parents, other teachers, other projects, etc.	206	185	510	2.2	45	13	25	13	28	34	65	45	13
26 Bilingual laws and legislation	217	179	512	2.1	64	21	36	5	18	23	49	27	18
27 Other-- specify	4	5	14	2.0	2	0	3	0	2	0	4	2	7
Total					1721	712	1107	522	731	966	1827	596	401

Note: Columns f(2) and f(3) contain frequencies of the responses 2, Some Need, and 3, Great Need, respectively.

Note: The N values are the total number of responses including 1, No Need, as well as responses 2 and 3.

Note: The Medians are calculated from all three possible responses.

teacher-made materials (item 4) both received a median rating of 2.5. The most frequently mentioned problems encountered in meeting training needs for both these areas are lack of release time and unidentified trainers. An additional problem, unidentified training materials, received a large response for the adapting materials area. These problems are the same as those identified by the directors; however, the problem of lack of funds is less apparent to teachers than it is to directors.

Another greatly needed training area (Md=2.5) is coordinating the bilingual program with the overall school curriculum (item 23). The most frequently mentioned problems in meeting this need are unidentified trainers, lack of release time, and schedule conflicts. For this area teachers recognized lack of release time as a more prominent problem than did the directors.

Diagnosing learning problems (item 9) has a median rating of 2.4. The problem in meeting needs for training in this area is clear -- trainers are unidentified.

Bilingual teaching strategies (item 12), teaching reading in the bilingual program (item 16), and teaching the content areas in the bilingual program (item 17) all were given median ratings of 2.4. The high frequency problems associated with bilingual teaching strategies are lack of release time and unidentified trainers. For teaching reading and content areas, the most outstanding problem is unidentified trainers.

For the high need areas presented above, teachers indicated the most frequently encountered problem is lack of release time. The next most frequent problem is trainers are unidentified. Although these are the

same problems most frequently mentioned by the directors, their order of precedence is reversed. Teachers may feel more strongly that training opportunities exist but cannot be utilized because of lack of release time, while directors may feel that training opportunities do not exist in sufficient numbers for areas of concern.

The response frequencies given by teachers for the individual problems were summed across training areas, and the totals are shown in the bottom row of Table 21. Lack of release time and unidentified trainers remain the problems with the highest totals (f=1827 and 1721, respectively). Other high frequency problems are training materials unidentified, schedule conflicts, and lack of funds.

In summary, directors and teachers agree remarkably well on which areas teacher training is most greatly needed and on which problems most often prevent needed training. The teacher training areas identified by both directors and teachers as being most needed all involve curriculum and teaching methodology specific to the bilingual situation. The reader may recall from Table 12 that about 91% of the 560 responding teachers have five or fewer years of bilingual teaching experience. Indeed, over half of them (287 out of 560) have two or fewer years bilingual teaching experience (see also Table 13). Since most teachers sampled in this survey apparently taught in a non-bilingual setting before switching to the bilingual classroom, it is reasonable to infer that few of them received pre-baccalaureate training designed to prepare them for teaching in a bilingual program. The nature of the training most needed by teachers may therefore, require the duration and intensity of college-level coursework for adequate results. Colleges and universities could make

an important contribution to bilingual education by offering programs designed to provide area specialization in bilingual education to currently employed teachers, perhaps in the evenings and summers. Our data suggests that the success of such programs would depend largely on local project willingness to provide a quid pro quo to participating teachers in the form of release time, compensation or other incentive.

Directors believe that teachers have a great need (Md=2.5) for training in facilitating parental involvement. Teachers, however, assess their need for training in this area more modestly (extent of need median of 2.2) compared to other areas.

Although directors and teachers identified the same most prevalent problem areas, the ranking of the problems by response frequency differed slightly between the two groups. Teachers most often indicated that lack of release time is a problem, followed by the problem of unidentified trainers. Directors also identified these problems most often, but in reverse order. For both groups the problem of identifying training materials has the third highest response frequency. The last two prominent problems, lack of funds and schedule conflicts, are ranked fourth and fifth, respectively, by the directors and the reverse by the teachers. Directors apparently believe that the problems which prevent meeting training needs are most frequently outside their immediate environment and control. Teachers seem more likely to believe that they could be receiving training if their immediate environment were more accomodating (release time, relief from schedule obligations). If appropriate training opportunities for teachers are made known to administrators, perhaps they would be more likely to encourage teachers to receive such

training. By providing needed training opportunities, bilingual network centers could help remove some of the most prevalent barriers to teacher training.

Paraprofessional Training. Directors and teachers were asked (question 6 for directors and question 8 for teachers) to provide information on the needs they perceive for training paraprofessionals. The procedure for responding to this question was the same as that used for the previous question on the teacher training (see Figure 8). The items in the list of training areas for paraprofessionals reflect tasks and responsibilities commonly assigned to paraprofessionals. The problem areas in the list of problems are the same ones used for the question on teacher training.

The results for the directors' responses to this question are presented in Table 22, using the same format as Tables 20 and 21. The four training areas having the greatest need (with extent of need medians of 2.4 to 2.6) and the most freqently encountered problems associated with those areas are discussed here.

Bilingual teaching strategies (item 3) and teaching content areas in the bilingual program (item 6) both received extent of need medians of 2.6 with 52% and 53%, respectively, of the 156 directors indicating "great" need for paraprofessional training in these areas. The most prominent problems for training in bilingual teaching strategies are lack of release time, unidentified trainers, and unidentified training materials, in that order. These same problems are also the most frequent ones for teaching content areas, but lack of release time is ranked third instead of first.

9a. Below is a list of areas for project paraprofessional training. Please rate your need for project paraprofessional training in these areas by referring to the scale below and writing the appropriate number in the "Extent of Need" column.

1-No need 2-Some need 3-Great need

9b. If you have indicated needs for project paraprofessional training in some of the areas listed below (left), please check in the appropriate columns below the problem areas encountered in meeting these needs.

Training Areas \ List of Problems	Extent of Need	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Evaluating student performance.....										
2 Diagnosing learning problems.....										
3 Bilingual teaching strategies.....										
4 Individualized instruction.....										
5 Teaching reading in the bilingual program.....										
6 Teaching content areas in the bilingual program.....										
7 Early childhood education for bilingual children.....										
8 Affective learning in the bilingual program.....										
9 Classroom management and discipline.										
10 Bilingual laws and legislation.....										
11 Philosophy and rational for bilingual education.....										
12 Working effectively with head teachers.....										
13 Small group processes.....										
14 Record keeping.....										
15 Additional language training.....										
16 Other--specify_____.....										

Figure 8. Paraprofessional Training Needs and Problems (Director Question 6, Teacher Question 8)

Table 22

Director Ratings of Needs for Paraprofessional Training

Training Areas	Extent of Need				Response Frequencies to Problems								
	f(2) Some Need	f(3) Great Need	N Total	Median	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of Funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Evaluating student performance	63	47	145	2.1	28	9	16	7	13	19	26	7	4
2 Diagnosing learning problems	50	68	147	2.4	33	11	19	7	11	19	26	6	6
3 Bilingual teaching strategies	46	81	148	2.6	23	18	20	6	10	19	27	5	9
4 Individualized instruction	51	64	148	2.3	25	12	18	4	10	16	23	6	6
5 Teaching reading in the bilingual program	48	80	151	2.5	20	19	23	4	13	19	23	6	6
6 Teaching content areas in the bilingual program	52	82	151	2.6	29	16	24	6	13	15	23	5	4
7 Early childhood education for bilingual children	46	39	141	1.8	17	7	8	5	12	8	15	6	3
8 Affective learning in the bilingual program	58	64	148	2.3	36	7	17	5	10	14	19	6	5
9 Classroom management and discipline	64	56	151	2.2	24	11	13	4	9	15	20	4	5
10 Bilingual laws and legislation	57	39	150	1.9	14	8	6	3	13	13	19	10	4
11 Philosophy and rational for bilingual education	53	50	150	2.0	11	10	7	4	8	14	19	9	6
12 Working effectively with head teachers	49	63	148	2.3	21	9	12	4	10	17	20	10	3
13 Small group processes	57	61	150	2.3	21	5	16	3	9	14	20	7	4
14 Record-keeping	60	34	149	1.8	12	6	11	6	6	10	17	6	7
15 Additional language training	52	65	150	2.3	13	7	8	3	22	21	27	11	4
16 Other--specify	2	7	12	2.6	5	2	2	2	2	0	3	2	1
Total					332	157	220	73	171	233	327	106	77

Note: Columns f(2) and f(3) contain frequencies of the responses 2, Some Need, and 3, Great Need, respectively.

Note: The N values are the total number of responses including 1, No Need, as well as responses 2 and 3.

Note: The Medians are calculated from all three possible responses.

Teaching reading in the bilingual program is a related high need area with a median of 2.5 and with 51% of the directors expressing "great" need. The same problem areas as above are those most frequently checked. Lack of release time and unidentified training materials are tied for the highest frequency, and unidentified trainers is next.

Diagnosing learning problems was given an extent of need median of 2.4 with a substantial proportion (44%) of directors indicating "great" need. The high frequency problems associated with this area are unidentified trainers and lack of release time.

These four closely related high need areas all involve teaching methodology as opposed to other kinds of duties a paraprofessional may have. The most frequently checked problems associated with these four areas are the same ones identified for teacher training: Unidentified trainers, lack of release time, and unidentified training materials. When the total response frequencies for the problems are examined (bottom row, Table 22), unidentified trainers and lack of release time retain their first and second respective rankings (f=332 and 327, respectively), but schedule conflicts ranks third (f=233) above unidentified training materials (f=220). For training areas other than those four having the greatest need, schedule conflicts is a more frequently encountered problem than unidentified training materials. The differences between the frequencies of the top two problems (5) and between the third and fourth problems (13) are actually too small to be of consequence. These four problems, taken together, involve both the external problem of identifying trainers and materials and the internal, local problems of obtaining release time and resolving schedule conflicts.

The results for the teachers' ratings of needs for paraprofessional training are displayed in Table 23. Somewhat fewer teachers (about 80 to 85%) responded to this question than to the question on teacher training. Five training areas having high extent of need medians (2.4 to 2.6) and the problems most frequently preventing training in these areas are discussed below. The proportion of the possible 573 responding teachers who indicated "great" need for paraprofessional training in these five areas ranges from 48% to 37%.

The training area receiving the highest extent of need rating (Md=2.6) is bilingual teaching strategies (item 3). Lack of release time is the most prominent problem associated with this area, followed by unidentified trainers and schedule conflicts.

Teaching reading (item 5) and teaching the content areas (item 6) in the bilingual program both have medians of 2.5. The same two problems, lack of release time and unidentified trainers, were associated with both of these teaching areas.

Diagnosing learning problems also received an extent of need median of 2.5. Lack of release time and unidentified trainers are once again the most often encountered problems for this training area.

Teachers also rated affective learning in the bilingual program with a high extent of need median of 2.4. Although the median rating for this area given by directors was slightly lower (2.3), this difference does not constitute a significant discrepancy between directors' and teachers' perceptions. The proportion of directors indicating great need for paraprofessional training for this area is 41% (of 156 directors), while the proportion of teachers indicating great need is 37% (of 573 teachers).

Table 23

Teacher Ratings of Needs for Paraprofessional Training

Training Areas	Extent of Need				Response Frequencies to Problems								
	f(2) Some Need	f(3) Great Need	N Total	Median	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of Funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Evaluating student performance	160	203	489	2.2	68	42	45	20	58	59	98	17	15
2 Diagnosing learning problems	145	240	487	2.5	75	49	47	23	50	46	90	17	15
3 Bilingual teaching strategies	161	273	500	2.6	78	59	44	21	54	70	106	16	15
4 Individualized instruction	166	210	494	2.3	65	40	37	16	59	60	92	16	16
5 Teaching reading in the bilingual program	143	257	495	2.5	74	53	42	19	51	47	93	12	16
6 Teaching content areas in the bilingual program	152	246	485	2.5	71	39	48	26	47	50	90	13	14
7 Early childhood education for bilingual children	131	183	457	2.2	61	32	26	11	49	27	55	14	12
8 Affective learning in the bilingual program	152	211	465	2.4	72	35	35	14	41	40	72	18	12
9 Classroom management and discipline	144	212	483	2.3	58	33	35	14	41	45	78	17	14
10 Bilingual laws and legislation	191	148	468	2.1	59	27	24	13	37	28	59	30	8
11 Philosophy and rational for bilingual education	156	169	469	2.1	45	32	29	9	34	33	59	22	10
12 Working effectively with head teachers	141	190	484	2.1	49	24	30	12	35	43	76	21	14
13 Small group processes	171	191	489	2.2	57	30	34	9	42	50	84	14	15
14 Record-keeping	162	144	485	1.9	38	16	26	11	34	41	87	20	14
15 Additional language training	158	195	484	2.2	52	40	28	11	63	65	85	31	15
16 Other--specify	4	10	25	1.9	5	3	5	2	10	4	10	4	6
Total					892	501	497	211	644	660	1,165	307	210

Note: Columns f(2) and f(3) contain frequencies of the responses 2, Some Need, and 3, Great Need, respectively.

Note: The N values are the total number of responses including 1, No Need, as well as responses 2 and 3.

Note: The Medians are calculated from all three possible responses.

The difference between the directors' and teachers' median is due, in part, to the fact that a smaller proportion of teachers responded to the item (81%) compared to directors (95%). The problems lack of release time and unidentified trainers received the same response frequencies for this training area.

The four training areas which were given the highest extent of need ratings by teachers are the same areas which were rated highest by the directors. Teachers also seem to think that paraprofessionals should have training in teaching methodology in preference to training in other areas.

For the five training areas of greatest need, lack of release time is most often indicated as a problem, followed by unidentified trainers, schedule conflicts, and lack of funds. When the response frequencies for problems are summed over training areas, the same four problems have the highest totals (bottom row, Table 23). Lack of release time received a very large number of responses (f=1165) compared to unidentified trainers as a slightly more frequent problem than lack of release time. Teachers clearly believe that lack of release time is more of a problem in obtaining training for paraprofessionals than unidentified trainers. The reader may recall a similar difference between directors and teachers regarding these problems for teacher training, but the frequency differences between the two problems were not impressive in that context. Schedule conflicts (f=660) and lack of funds (f=644) are the third and fourth, respectively, most frequent problems. These results differ from the directors' results, where unidentified training materials rather than lack of funds ranks fourth.

Teachers and directors agree on the training most needed for paraprofessionals and on three of the four most frequently encountered problems in attempting to meet those training needs. Both groups selected the training areas in teaching methodology in preference to other possible training areas: Bilingual teaching strategies, teaching reading and content areas bilingually, and diagnosing learning problems. The three most frequently encountered problems for both directors and teachers are lack of release time, unidentified trainers, and schedule conflicts. Directors indicated unidentified trainers slightly more frequently than lack of release time. In contrast, teachers indicated lack of release time as a problem far more frequently than unidentified trainers. These results support and amplify the same reversal of problem priorities found between directors' and teachers' results for needs for teacher training. Schedule conflicts is the third ranked problem for both directors and teachers. This problem is more prominent in meeting paraprofessional training needs than teacher training needs. Directors' and teachers' results clearly contrast on the fourth ranked training problems. Directors indicated that unidentified training materials is the fourth ranked problem, but teachers indicated that lack of funds is ranked fourth. These results are similar to those for teacher training, and may indicate that directors believe that some of the main problems in obtaining training for paraprofessionals lie outside the control of the project or LEA. Teachers are more likely to perceive problems as occurring within the local project or LEA.

The fact that both teachers and directors identified areas dealing with teaching methodology as most greatly needed for paraprofessional

training is suggestive of the role that the paraprofessional is expected to play in typical bilingual programs. That role appears to be quite similar to that of the teacher. Since paraprofessionals are often paid by the hour rather than on a straight salary, any training they acquire is likely to be uncompensated. In this context, the teachers' perception that lack of release time constitutes the greatest obstacle to paraprofessional training is probably quite valid. The apparent reliance on paraprofessionals to fill a teaching role suggests that they are used to compensate for teachers' gaps in expertise in bilingual instruction. If this inference is sound, then it lends additional weight to the magnitude of training needs for teachers discussed above.

Administrator Training. Administrators' needs for training were evaluated only by directors (Figure 9). The instructions for responding to this question were the same as those for the teacher and paraprofessional training questions. The entries in the column of training areas were selected because they include responsibilities and concerns of the bilingual project director and related administrative staff. The list of problems is the same as was used in the other training questions.

Table 24 contains the results of the directors' responses to this question in the same format used for Tables 20 through 23. As for the other training questions, this discussion highlights the results for the training areas receiving the highest medians for extent of need ratings and for the problem areas receiving the highest number of responses for the selected training areas. Somewhat fewer directors responded to this question than to the teacher and paraprofessional training questions,

7a. Below is a list of areas for project administrators training. Please rate your need for project administrators training in these areas by referring to the scale below and writing the appropriate number in the "Extent of Need" column.

7b. If you have indicated needs for project administrators training in some of the areas listed below (left), please check in the appropriate columns below the problem areas encountered in meeting these needs.

1-No need 2-Some need 3-Great need

Training Areas \ List of Problems	Extent of Need	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Evaluating student progress.....										
2 Student selection and placement.....										
3 Facilitating parent involvement.....										
4 Identifying and using community resources.....										
5 Coordinating the bilingual program with the overall school curriculum..										
6 Evaluating the bilingual program....										
7 Disseminating information to parents, teachers, other project directors, etc.....										
8 Bilingual laws and legislation.....										
9 Bilingual program planning and organization.....										
10 Proposal development.....										
11 Staff development/inservice training for staff.....										
12 Management of interpersonal relations and interagency coordination..										
13 Standardized testing.....										
14 Staff selection.....										
15 Budgeting.....										
16 Other--specify_____.....										

Figure 9. Administrator Training Needs and Problems (Director Question 7)

Table 24

Director Ratings of Needs for Administrator Training

Training Areas	Extent of Need				Response Frequencies to Problems								
	f(2) Some Need	f(3) Great Need	N Total	Median	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Evaluating student progress	64	32	142	1.9	16	10	11	8	8	17	10	1	5
2 Student selection and placement	55	32	145	1.8	15	6	11	4	5	16	5	2	8
3 Facilitating parent involvement	65	54	145	2.2	26	6	18	2	11	15	18	8	6
4 Identifying and using community resources	65	38	144	2.0	21	7	12	3	9	19	11	4	5
5 Coordinating the bilingual program with the overall school curriculum	43	69	146	2.4	22	10	15	7	7	23	13	4	8
6 Evaluating the bilingual program	52	57	148	2.2	21	9	14	6	9	11	5	2	5
7 Disseminating information to parents, teachers, other project directors, etc.	44	36	145	1.7	10	5	9	3	12	11	4	4	8
8 Bilingual laws and legislation	46	43	144	1.9	16	7	6	1	5	10	9	3	3
9 Bilingual program planning and organization	59	52	146	2.1	21	14	14	3	8	14	11	5	6
10 Proposal development	50	48	144	2.0	19	15	17	4	6	11	14	0	4
11 Staff development/ inservice training for staff	55	60	145	2.3	24	16	16	4	15	22	17	2	5
12 Management of interpersonal relations and interagency coordination	52	55	143	2.2	28	9	13	5	9	15	9	4	6
13 Standardized testing	58	36	144	1.9	15	11	14	10	7	13	6	0	5
14 Staff selection	39	40	146	1.6	16	4	10	3	5	9	9	1	5
15 Budgeting	46	39	145	1.8	21	5	12	4	11	11	6	1	4
16 Other--specify	1	6	13	2.0	4	2	2	2	1	1	1	1	2
Total					295	136	194	69	128	221	148	42	85

Note: Columns f(2) and f(3) contain frequencies of the responses 2, Some Need, and 3, Great Need, respectively.
Note: The N values are the total number of responses including 1, No Need, as well as responses 2 and 3.
Note: The Medians are calculated from all three possible responses.

but the response rate remained high, above 90%. For most of the training areas, about two-thirds of the directors indicated either "some" need or "great" need for training. The proportions of directors having "great" need for training overall are somewhat less than the proportions of directors perceiving "great" need for training for teachers and paraprofessionals. Consequently, the values of the medians for the extent of need ratings are lower for administrator training than for teacher or paraprofessional training.

Coordinating the bilingual program with the overall school curriculum (item 5) is the training area receiving the highest extent of need median of 2.4, with 44% of directors indicating great need for training. The two most frequently encountered problems associated with this area are schedule conflicts and unidentified trainers. A third problem for this area is unidentified training materials.

Staff development/inservice training for staff (item 11) is also a high need area, with a median rating of 2.3 and with 38% of directors having great need. The problems most often indicated for this area are unidentified trainers, schedule conflicts, and lack of release time.

Evaluating the bilingual program, management of interpersonal relations and interagency coordination, and facilitating parent involvement are all training areas given extent of need medians of 2.2. Over 35% of the directors rate their need for training in these areas as "great." Unidentified trainers is the problem most frequently encountered by directors for all three training areas. Schedule conflicts is a secondary problem for training in management of interpersonal relations

and interagency coordination. Secondary problems for facilitating parental involvement are unidentified training materials and lack of release time.

Bilingual program planning and organization received a moderate extent of need median of 2.1, but 33% of the directors indicated great need for training in this area. The main problem associated with this area is, again, unidentified trainers.

The areas of training most needed by directors seem to generalize to management of the project as it relates to demands of its environment, such as the overall school curriculum, staff development, evaluation, interpersonal relationships, and parent involvement. The problems most frequently encountered in attempting to meet these training needs are unidentified trainers, schedule conflicts, and unidentified training materials. When the response frequencies for the problem areas are summed across all training areas, the totals in the bottom row of Table 24 show that these problems remain the most prominent and in the same order.

Although directors report less need for training for themselves than for either teachers or paraprofessionals, their responses indicate that they do need additional training, especially in the areas noted above. The reader should note that respondents may perceive their own needs for professional improvement as of lesser magnitude than would be perceived by respondents in different roles. Thus, the project directors generally perceived the need for teacher training as of greater magnitude than did teachers, although both groups reported a substantial need. Asking professionals to rate their own need for additional training may be experienced as evaluative (in the sense of identifying professional

weaknesses) and therefore threatening. Since this evaluative flavor is associated with perceived professional competence, individuals may be able to assess the training needs of others more dispassionately than they are able to assess their own.

Teachers were not asked to rate administrators' needs for training since we felt that some project directors would find this threatening and might be less willing to cooperate in the survey as a result. To the extent that assessing training needs could be seen as evaluating professional competence, we felt that respecting the traditional educational convention of superordinate evaluation of subordinate would result in more and better data than would an attempt to reverse this convention. The tendency of directors to rate teacher training needs as of greater magnitude than teachers rated their own needs suggests that teachers would likewise perceive administrators' needs for training as somewhat greater than administrators perceive their own needs. Empirical validation of this hypothesis, however, is beyond the scope of the present study.

Need for Measurement Instruments and Instructional Materials

This section of the report presents and discusses the results for the last major part of the survey instruments, a question on needs for measurement instruments (Director Question 8, Teacher Question 9) and a question on needs for instructional materials (Director Question 9, Teacher Question 10). The questions were formatted to give the respondents the opportunity to list their needs according to non-English language, range of grade levels, subject area, and type of instrument or material.

In order to assist network centers in making design and production decisions focused on priorities in the field, these questions were designed to obtain information about teachers' and directors' needs for these products. Dissemination and Assessment Centers can use this information for guidance in selecting manuscripts for publication, in deciding printing specifications, and in determining dissemination strategies. Materials Development Centers will find the results to be useful in identifying development priorities by grade level, subject area, and type of product. They can also determine whether instruments for assessing readiness, placement, or achievement should be provided with their materials. Resource Centers may wish to provide training in using or developing high need instruments and materials. This information may also be used by commercial developers and publishers who may wish to produce materials for an existing market. By including the needs assessment information in their planning, these agencies and projects will be able to use their resources more effectively.

The format of these questions was designed to organize teachers' and directors' responses to ensure the usefulness of the responses and to facilitate data analysis. The instructions directed respondents to use coded lists for describing their needs after indicating the language needed. The first coded list was for grade level ranges grouped as follows: Early childhood, kindergarten (preschool); grades 1-3 (elementary, basic skills); grades 4-5 (elementary, basic concepts); grades 6-8 (middle, junior high, intermediate); grades 9-12 (high school). This grouping was used to reduce the volume of data to usable and interpretable levels while retaining sufficient detail to avoid overgeneralization.

The eleven subject areas listed were selected to include curriculum areas which may appear at any grade level, from preschool to twelfth grade, including vocationally oriented courses. To keep the quantity of data manageable, broad categories such as language arts and natural sciences were used instead of trying to list all possible courses within subject areas. The subject areas used were English language arts; non-English language arts; natural sciences; social sciences; mathematics; technical/trade/industrial; business/office occupations; fine arts; health, physical education, and recreation; agriculture; and home economics.

The types of measurement instruments were chosen to represent the three major areas of pupil assessment: Achievement, aptitude and ability, and placement and readiness (diagnosis). The achievement classification was divided into two types, norm-referenced and criterion-referenced, to distinguish the two different ways of measuring a students' achievement

progress. While achievement tests are used to measure the progress of student learning, aptitude or ability measures are intended to assess a pupil's learning potential and strengths, whether in word reasoning, mathematics, or fine arts. Placement and readiness measures are used as diagnostic tools to help select appropriate materials or programs and for individual instruction.

The classifications of types of instructional materials were designed to encompass the kinds of materials used in most curricula so that respondents could describe their needs as accurately as possible. These categories were not meant to be mutually exclusive; i.e., remedial material may also be reading material. Respondents could, however, indicate as many types of materials as needed for any given language, grade range, or subject area. The types of materials listed were high interest/low skill, remedial, basic, supplementary, reading, visual, audio, audio-visual, and manipulative material.

Interpreting the Results. The instructions for the measurement instruments and instructional materials questions asked directors and teachers to respond by first indicating the language of the needed product and then by filling in the rest of the form with codes which correspond to grade range, subject area, and type of instruments or materials needed. By using the coding system, the respondents could quickly and conveniently indicate a wide variety of needs covering several languages, grade levels, etc. This same coding system facilitated the preparation of the questionnaire responses for keypunching.

For analysis purposes, the data for each questionnaire were

organized into a hierarchy having four levels: Language, grade level, subject area, and type. Questionnaire data were then sorted and merged, and crosstabulation tables were formed.

Only needs for instruments and materials for the Spanish language are presented in the tables in this report. Since about 85% of the projects, 88% of responding teachers (N=570), and 80% of the number of represented students were reported to be using the Spanish language, information lost by reporting results for Spanish only is minimal. At the same time, the usefulness of the results is greatly increased because they apply only to Spanish materials and are not confounded by results for other languages. For any one language other than Spanish, the number of respondents, either directors or teachers, is quite small (Twelve teachers each report using French and Portuguese in Table 9). The data for other languages are, therefore, fairly specific to the project or projects reporting them and can be extracted from our data files on an as needed basis.

The results for this section are reported in a series of tables (numbered from 24 to 44), ten containing results for measurement instrument needs and ten containing results for instructional materials needs. Each set of ten tables is divided into two groups of five tables, one for directors, and the other for teachers. Each of the five tables in each group contains the results for one grade range. Thus each table summarizes teacher or director needs for instruments or materials in a crosstabulation of subject areas by types for one of five grade ranges.

The results in the tables represent the frequency of responses made for a particular classification of instrument or material, such as need

for basic Spanish language arts material for the fourth through fifth grades indicated by teachers. The number reported in the table for this cell is the number of teachers who indicated a need for the material with this classification. Each table also contains row and column marginal totals. The row totals show how many responses indicated need for a particular subject area, while the column totals show how many responses indicated need for a particular type of instrument or material. The grand total in the lower right-hand corner represents the total number of responses indicating need for instruments or materials for the particular grade range represented by that table. This figure is best used as an indication of relative need between grade ranges.

The reader may use a number of strategies to interpret the results presented here. Since we discuss only a few, exclusion of a strategy that may occur to the reader does not necessarily mean that it is inappropriate. The entries within a given table may be compared to one another to see which types of instruments or materials are most needed for a particular subject area, or to determine for which subject area a particular type of instrument or materials is most needed. Similar comparisons may be made between tables. For example, one may be interested in the comparative need for mathematics placement instruments from preschool through high school. Comparisons can also be made between entries from directors' responses and entries from teachers' responses, as long as the reader remembers that the results represent almost four times more teachers than directors.

The marginal totals in a table may also be used for making comparisions. Using row total entries (found in the last column on the right), relative needs for subject areas can be determined. Relative needs for types of instruments or materials can be ascertained by comparing the column total entries (found in the bottom row). Between table comparisons, showing differences and trends for grade ranges or respondents (teachers and directors), are also possible.

In addition to comparing frequencies directly, proportions can be computed and compared. A cell frequency can be converted to a proportion of the grand total of responses or to a proportion of a marginal total, depending on the intended comparison. Marginal total entries may also be converted to proportions of the grand total. Using proportions rather than frequencies may facilitate efforts to draw inferences from comparisons between tables.

The results obtained for this section on needs can also be compared to the demographics provided by directors and teachers in Tables 10 and 11. The number of projects and students using Spanish can be used as a rough guide for comparing the intensity of needs across grade ranges expressed by directors and teachers. Similar comparisons can be made using the number of classes taught by teachers. The results of such comparisons may yield ratios that indicate a generally greater need per student, project, or class for a subject area or grade range than is reflected by the raw frequencies.

The reader should be aware that the results displayed in these tables can be rearranged into presentations which may more directly address the unique interests of individual readers. For example, if the

reader is primarily interested in the needs for basic materials for grades 1-8 , a table for each respondent group can be constructed using the entries for basic materials from the tables containing grades from one to eight. The resulting tables would present only the desired information in a more concise form (one table for each respondent group instead of three).

Measurement Instruments. Directors and teachers were asked to indicate their needs for pupil assessment instruments. The survey question used for both respondent groups is presented in Figure 10. The results for this question are presented in a series of ten tables, Table 25 through Table 34. The first five tables (25-29) contain the results from the Director Questionnaire. The second five tables (30-34) contain the results from the Teacher Questionnaire. Each table contains results for one grade range (e.g., grades 1-3), so that the five tables correspond to the five grade ranges as used in the survey question. At this point the reader is encouraged to examine Figure 10 and Tables 25-34 to become familiar with their organization. Because the amount of information presented is large and the strategies for interpreting it are so numerous, this discussion focuses on general highlights only.

Examination of the subject area marginal totals for the directors' needs for measurement instruments (last column on right in Tables 25 through 34) shows that Spanish language arts instruments are consistently ranked highest among the subject areas. Although English language arts ranks second (f=43) at the preschool level (Table 24), this subject drops in rank to fourth and fifth in the higher grade levels. Mathematics is

9. Please note the codes to the left of the items in the lists which follow:

Code	Grade Ranges
1	Early Childhood, Kindergarten
2	1-3
3	4-5
4	6-8
5	9-12

Code	Subject Areas
01	English Language Arts
02	Non-English Language Arts
03	Natural Sciences
04	Social Sciences
05	Mathematics
06	Technical/Trade/Industrial
07	Business/Office Occupations
08	Fine Arts
09	Health, Physical Education, and Recreation
10	Agriculture
11	Home Economics

Code	Measurement Instruments
1	Achievement--Norm-Referenced
2	Achievement--Criterion-Referenced
3	Aptitude/Ability
4	Placement/Readiness

Using the form below, please describe your needs for measurement instruments by using the codes above to indicate the grade, subject, and type of test needed. In the first column of the form, write in the language needed; in the next three columns, write in the code numbers corresponding to the grade level, subject area, and type of instrument needed. Please write only one code in each column for each row. Use as many rows as needed for responding.

Language of Instrument	Grade Range	Subject Area	Type of Measurement Instruments

Figure 10. Measurement Instruments (Director Question 8, Teacher Question 9)

Table 25

Distribution of Directors' Needs for Types of Measurement Instruments across Subject Areas for Spanish Speakers: Early Childhood and Kindergarten Classes

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	15	10	3	15	43
Spanish Language Arts	38	25	7	28	98
Natural Sciences	7	7	6	7	27
Social Sciences	11	12	5	7	35
Mathematics	13	14	8	7	42
Technical/Trade Industrial	0	0	0	0	0
Business/Office Occupations	0	0	0	0	0
Fine Arts	3	3	4	1	11
Health, Physical Ed., Recreation	2	3	1	3	9
Agriculture	0	0	0	0	0
Home Economics	0	0	0	0	0
Total	89	74	34	68	265

Table 26

Distribution of Directors' Needs for Types of Measurement Instruments across Subject Area for Spanish Speakers: First through Third Grades

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	18	11	8	14	51
Spanish Language Arts	24	36	19	31	110
Natural Sciences	13	14	14	7	48
Social Sciences	16	21	15	8	60
Mathematics	27	24	14	10	75
Technical/Trade/ Industrial	0	0	0	0	0
Business/Office Occupations	0	0	0	0	0
Fine Arts	4	6	4	3	17
Health, Physical Ed., Recreation	3	2	1	1	7
Agriculture	0	0	0	0	0
Home Economics	0	0	0	0	0
Total	105	114	75	74	368

Table 27

Distribution of Directors' Needs for Types of Measurement Instruments across Subject Areas for Spanish Speakers: Fourth and Fifth Grades

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	16	9	7	10	42
Spanish Language Arts	34	28	13	20	95
Natural Sciences	12	18	11	8	49
Social Sciences	17	21	10	8	56
Mathematics	24	21	12	9	66
Technical/Trade/ Industrial	1	1	2	1	5
Business/Office Occupations	1	1	1	1	4
Fine Arts	4	6	4	3	17
Health, Physical Ed., Recreation	3	2	1	1	7
Agriculture	0	0	0	0	0
Home Economics	1	1	1	1	4
Total	113	108	62	62	345

Table 28

Distribution of Directors' Needs for Types of Measurement Instruments across Subject Areas for Spanish Speakers: Sixth through Eighth Grades

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	8	5	4	4	21
Spanish Language Arts	29	26	12	16	83
Natural Sciences	10	14	6	6	36
Social Sciences	11	19	6	6	42
Mathematics	17	15	8	7	47
Technical/Trade/ Industrial	0	1	1	1	3
Business/Office Occupations	0	1	2	1	4
Fine Arts	3	5	1	1	10
Health, Physical Ed., Recreation	2	3	1	1	7
Agriculture	0	1	0	0	1
Home Economics	0	1	0	0	1
Total	80	90	41	53	255

Table 29

Distribution of Directors' Needs for Types of Measurement Instruments across Subject Areas for Spanish Speakers: Ninth through Twelfth Grades

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	6	3	3	4	16
Spanish Language Arts	16	15	8	11	50
Natural Sciences	9	16	5	9	39
Social Sciences	9	15	5	7	36
Mathematics	11	11	6	9	37
Technical/Trade/ Industrial	1	3	4	3	11
Business/Office Occupations	0	1	2	2	5
Fine Arts	2	2	2	2	8
Health, Physical Ed., Recreation	2	3	2	2	9
Agriculture	1	2	1	1	5
Home Economics	2	1	2	3	8
Total	59	72	40	53	224

consistently ranked second in priority of need, although this is a very close second at the preschool and high school levels. The five basic subject areas, English language arts, Spanish language arts, natural sciences, social sciences, and mathematics, received the great majority of the need requests for measurement instruments.

The marginal totals for the types of measurement instruments (bottom row) may be similarly examined across grade ranges. The two types of achievement tests, norm-referenced and criterion-referenced, are consistently ranked first and second, although they alternate ranks between grade ranges. When response frequencies are totaled across grade ranges, criterion-referenced tests rank slightly above norm-referenced tests. Aptitude/ability tests and placement/readiness tests are ranked fourth and third, respectively, across all grade ranges.

When subject areas and types of instruments are considered together, the greatest needs expressed by directors are for norm-referenced measures for Spanish language arts, criterion-referenced measures for Spanish language arts, norm-referenced tests for mathematics, and criterion-referenced tests for mathematics, in that order. There is a greater need for norm-referenced measures than for criterion-referenced measures for English langauge arts. Director preference for norm-references measurement instruments for basic subject areas may be related to their needs to evaluate their projects. In the absence of control groups, norm-referenced measures are necessary to meet these accountability requirements.

Teachers' needs for measurement instruments are summarized in Tables 30 through 34. Examination of the marginal totals for subject areas reveals that teachers, as well as directors, ranked Spanish language arts

Table 30

Distribution of Teachers' Needs for Types of Measurement Instruments across Subject Areas for Spanish Speakers: Early Childhood and Kindergarten Classes

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	10	10	11	28	59
Spanish Language Arts	27	27	28	57	139
Natural Sciences	7	9	12	13	41
Social Sciences	7	14	9	9	39
Mathematics	15	25	18	38	96
Technical/Trade/ Industrial	0	0	1	0	1
Business/Office Occupations	0	0	1	0	1
Fine Arts	0	0	6	3	9
Health, Physical Ed., Recreation	1	4	6	6	17
Agriculture	0	0	1	0	1
Home Economics	0	0	1	1	2
Total	67	89	94	155	405

Table 31

Distribution of Teachers' Needs for Types of Measurement Instruments across Subject Areas for Spanish Speakers: First through Third Grades

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	11	25	19	32	87
Spanish Language Arts	73	80	75	101	329
Natural Sciences	20	35	23	25	103
Social Sciences	27	34	26	21	108
Mathematics	30	49	32	44	155
Technical/Trade/ Industrial	2	2	2	2	8
Business/Office Occupations	3	2	2	2	9
Fine Arts	3	6	10	7	26
Health, Physical Ed., Recreation	3	9	10	7	29
Agriculture	3	3	4	3	13
Home Economics	2	2	3	3	10
Total	177	247	206	247	877

Table 32

Distribution of Teachers' Needs for Types of Measurement Instruments across Subject Areas for Spanish Speakers: Fourth and Fifth Grades

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	11	15	12	32	57
Spanish Language Arts	31	44	33	37	145
Natural Sciences	17	24	10	15	66
Social Sciences	17	27	18	12	74
Mathematics	16	20	17	21	74
Technical/Trade/ Industrial	1	1	1	1	4
Business/Office Occupations	1	1	1	1	4
Fine Arts	2	2	3	1	8
Health, Physical Ed., Recreation	3	4	6	3	16
Agriculture	1	1	1	1	4
Home Economics	1	1	2	2	6
Total	101	140	104	113	458

Table 33

Distribution of Teachers' Needs for Types of Measurement Instruments across Subject Areas for Spanish Speakers: Sixth through Eighth Grades

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	7	7	10	13	37
Spanish Language Arts	26	25	18	28	97
Natural Sciences	14	17	5	8	44
Social Sciences	17	23	7	8	55
Mathematics	15	13	15	14	57
Technical/Trade/ Industrial	0	0	0	0	0
Business/Office Occupations	0	1	1	1	3
Fine Arts	0	0	0	0	0
Health, Physical Ed., Recreation	1	2	0	1	4
Agriculture	0	0	0	0	0
Home Economics	0	2	0	0	2
Total	80	90	56	73	299

Table 34

Distribution of Teachers' Needs for Types of Measurement Instruments across Subject Areas for Spanish Speakers: Ninth through Twelfth Grades

Subject Area	Type of Measurement Instrument				
	Achievement Norm-Referenced	Achievement Criterion-Referenced	Aptitude/ Ability	Placement/ Readiness	Total
English Language Arts	8	7	8	9	32
Spanish Language Arts	13	17	17	18	65
Natural Sciences	6	10	6	6	28
Social Sciences	12	17	13	11	53
Mathematics	12	12	15	15	54
Technical/Trade/ Industrial	1	3	2	1	7
Business/Office Occupations	2	6	4	2	14
Fine Arts	1	2	1	1	5
Health, Physical Ed., Recreation	5	4	2	2	13
Agriculture	1	2	1	1	5
Home Economics	1	3	1	1	6
Total	62	83	70	67	282

as needing measurement instruments the most. Mathematics instruments ranked second over the entire range of grade levels. Teachers also indicated that their needs for instruments were greatest for the five basic subject areas.

Teachers' needs for types of measurement instruments, as shown in the marginal totals of the tables, are somewhat different from directors needs. At the preschool level, teachers show a much greater need for placement/readiness tests than for other types. For grades 1-3 both placement/readiness and criterion-referenced measures shared highest need rankings. In the upper grade ranges, criterion-referenced tests received the highest ranking while the need for placement/readiness dropped. When responses are totaled over all grade ranges, placement/readiness is ranked slightly higher than criterion-referenced, followed by aptitude/ability and norm-referenced achievement, in that order.

The types of instruments teachers need most for Spanish language arts and mathematics are placement/readiness tests and criterion-referenced achievement tests, in that order. Because teachers'primary concern is the student learning process, they need the diagnostic and prescriptive information provided by placement/readiness measures in order to provide appropriate learning experiences for each child. Criterion-referenced tests are then needed to measure student achievement against objectives within the teaching program. The standing of a student in relation to nationwide norms is, therefore, of secondary interest and usefulness to teachers.

Instructional Materials. The purpose of the next question was to obtain descriptions of directors' and teachers' needs for instructional

materials. Both directors and teachers responded to the question presented in Figure 11. Directors' needs for instructional materials are presented in a series of five tables, Tables 35-39. Teachers' needs are presented in a second series of five tables, Table 40 through Table 44. As with the results for needs for measurement instruments, each table contains results for one grade range. All five grade ranges are covered by each series of five tables. The organization of the tables for instructional materials is the same as that used for measurement instruments. This discussion focuses on general highlights of the results.

The subject area in which directors reported the greatest need for materials, across all grade levels, is Spanish language arts (f=543). The need for Spanish language arts ranks highest for preschool through grade 5 and drops to third and fourth places at the upper grade levels. Social sciences is ranked second across all grade levels, exhibiting a trend towards lesser need at the lower grade levels and greater need at the upper levels. Natural sciences received only twelve fewer response than social sciences and is ranked third overall. Mathematics is ranked fourth, while English language arts and fine arts are ranked fifth and sixth, respectively. As with needs for measurement instruments, needs for instructional materials are greatest in the basic subject areas.

The marginal totals for the types of instructional materials indicate that, across all grade levels, directors believe that basic materials are most needed, followed by supplementary materials. High interest/low skill materials received a few more responses than did reading materials. Audio-visual materials ranked fifth. For each grade range, directors consistently chose these five types of materials most frequently. The

10 Please note the codes to the left of the items in the lists which follow:

Code	Grade Ranges
1	Early Childhood, Kindergarten
2	1-3
3	4-5
4	6-8
5	9-12

Code	Subject Areas
01	English Language Arts
02	Non-English Language Arts
03	Natural Sciences
04	Social Sciences
05	Mathematics
06	Technical/Trade/Industrial
07	Business/Office Occupations
08	Fine Arts
09	Health, Physical Education and Recreation
10	Agriculture
11	Home Economics

Code	Types of Materials
1	High Interest/Low Skill
2	Remedial
3	Basic
4	Supplementary
5	Reading
6	Visual
7	Audio
8	Audio-Visual
9	Manipulative Material

Using the form below, please describe your needs for instructional materials by using the codes above to indicate the grade, subject, and type of instructional materials needed. In the first column of the form, write in the language needed; in the next three columns, write in the code numbers corresponding to the grade level, subject area, and type of instructional materials needed. Please write only one code in each column for each row. Use as many rows as needed for responding.

Language of Materials	Grade Range	Subject Area	Type of Instructional Materials

Figure 11. Instructional Materials (Director Question 9, Teacher Question 10)

Table 35

Distribution of Directors' Needs for Instructional Materials across Subject Areas for Spanish Speakers: Early Childhood and Kindergarten Classes

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	6	4	8	6	4	3	3	5	3	42
Spanish Language Arts	14	6	17	14	16	11	9	13	13	113
Natural Sciences	8	2	15	8	9	8	5	11	6	72
Social Sciences	6	3	14	9	9	4	3	8	4	60
Mathematics	5	2	10	8	5	4	3	6	4	47
Technical/Trade/Industrial	1	0	0	1	1	0	0	1	0	4
Business/Office Occupations	1	0	0	1	1	0	0	1	0	4
Fine Arts	4	2	6	7	6	4	3	6	4	42
Health, Phys. Ed., Recreation	2	0	2	3	3	1	0	4	3	18
Agriculture	1	0	0	1	1	0	0	1	0	4
Home Economics	1	0	0	1	1	0	0	1	0	4
Total	49	19	72	59	56	35	26	57	37	410

Table 36

Distribution of Directors' Needs for Instructional Materials across Subject Areas for Spanish Speakers: First through Third Grades

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	12	6	13	9	5	5	5	5	2	62
Spanish Language Arts	22	11	36	26	29	12	9	17	13	175
Natural Sciences	11	6	27	20	14	11	8	11	6	114
Social Sciences	14	6	30	22	14	7	6	12	7	118
Mathematics	11	6	22	17	10	7	6	8	6	93
Technical/Trade/Industrial	1	0	0	1	1	0	0	1	0	4
Business/Office Occupations	1	0	0	1	1	0	0	1	0	4
Fine Arts	5	2	8	13	6	4	4	6	5	53
Health, Phys. Ed., Recreation	3	0	2	4	4	1	0	3	1	18
Agriculture	1	0	0	1	1	0	0	1	0	4
Home Economics	1	0	0	1	1	0	0	1	0	4
Total	82	37	138	115	86	47	38	66	40	649

Table 37

Distribution of Directors' Needs for Instructional Materials across Subject Areas for Spanish Speakers: Fourth and Fifth Grades

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	9	6	8	5	5	4	4	2	1	44
Spanish Language Arts	15	11	25	18	19	8	7	12	7	122
Natural Sciences	12	5	19	16	13	7	4	7	4	87
Social Sciences	17	4	24	18	15	5	4	9	4	100
Mathematics	8	4	15	12	7	4	3	4	4	61
Technical/Trade/Industrial	1	0	1	2	1	0	0	2	1	8
Business/Office Occupations	1	0	1	2	1	0	0	2	1	8
Fine Arts	5	2	8	8	7	4	3	5	4	46
Health, Phys. Ed., Recreation	2	0	1	2	3	1	0	3	0	12
Agriculture	1	0	0	1	1	0	0	1	0	4
Home Economics	1	0	0	1	1	0	0	1	0	4
Total	72	32	102	85	73	33	25	48	26	496

Table 38

Distribution of Directors' Needs for Instructional Materials across Subject Areas for Spanish Speakers: Sixth through Eighth Grades

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	5	4	3	4	3	3	3	2	0	27
Spanish Language Arts	11	2	18	13	16	7	4	9	2	82
Natural Sciences	13	5	24	16	14	11	5	6	0	94
Social Sciences	18	6	24	18	13	6	5	8	1	99
Mathematics	11	9	18	16	8	4	3	5	5	79
Technical/Trade/Industrial	3	1	3	1	2	2	1	3	2	18
Business/Office Occupations	1	1	4	3	1	2	1	4	2	19
Fine Arts	2	1	3	5	4	3	2	2	1	23
Health, Phys. Ed., Recreation	1	0	2	1	2	2	1	3	1	13
Agriculture	0	0	0	1	0	0	0	0	0	1
Home Economics	1	0	2	2	0	1	1	1	1	9
Total	66	29	101	80	63	41	26	43	15	464

Table 39

Distribution of Directors' Needs for Instructional Materials across Subject Areas for Spanish Speakers: Ninth through Twelfth Grades

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	3	2	2	2	1	1	1	1	2	15
Spanish Language Arts	11	2	10	11	7	3	1	4	2	51
Natural Sciences	12	2	14	10	9	6	2	7	4	66
Social Sciences	16	1	16	11	12	3	3	5	1	68
Mathematics	13	6	13	11	6	3	2	5	4	63
Technical/Trade/Industrial	2	1	3	3	3	1	1	3	2	19
Business/Office Occupations	2	1	3	4	1	1	1	4	3	20
Fine Arts	1	0	4	4	4	1	0	2	0	16
Health, Phys. Ed., Recreation	2	0	2	1	2	2	2	3	1	15
Agriculture	0	0	0	0	0	0	0	0	0	0
Home Economics	2	0	3	3	1	1	1	3	1	15
Total	64	15	70	60	46	22	14	37	20	348

ranking of types from grade range to grade range is fairly consistent except for high interest/low skill materials, which increases in rank (and therefore need) as grade levels increase.

For the Spanish language arts subject area, directors consistently indicated basic materials as most needed, followed by reading and then supplementary materials, except for the high school grades. Preferred types of materials for the social and natural sciences were basic first, with about equal needs for high interest/low skill, supplementary, and reading.

The needs for materials expressed by teachers are similar to those for the directors. According to the marginal totals for subject areas taken across all grade ranges (Tables 40 through 44), teachers also ranked need for Spanish language arts first (with a very high frequency of 1260) and social science second. Mathematics is ranked third, with natural sciences fourth, reversing the order reported by directors. Teachers ranked English language arts and fine arts as fifth and sixth, respectively. The needs for Spanish language arts drops in rank at the high school level; the relative need for social science materials increases as grade levels increases; and the need for mathematics drops for grade levels 4 through 8.

Teachers' needs for types of instructional materials is reflected in the marginal totals of the tables. Across all grade levels, teachers indicated that their greatest need is for basic materials, followed by supplementary, second, and high interest/low skill, third. Unlike directors, teachers expressed greater need for audio-visual materials than for reading materials. Although teachers' and directors' need

Table 40

Distribution of Teachers' Needs for Instructional Materials
across Subject Areas for Spanish Speakers:
Early Childhood and Kindergarten Classes

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	20	5	12	10	7	10	9	13	11	97
Spanish Language Arts	29	21	33	33	26	25	21	36	35	259
Natural Sciences	14	6	27	14	11	16	9	18	18	133
Social Sciences	15	7	25	19	10	10	9	19	9	123
Mathematics	18	12	20	19	10	13	12	19	37	160
Technical/Trade/Industrial	0	0	0	0	0	0	0	1	0	1
Business/Office Occupations	0	0	0	0	0	0	0	1	0	1
Fine Arts	2	1	8	7	4	4	4	9	6	45
Health, Phys. Ed., Recreation	2	1	6	5	3	4	3	4	5	33
Agriculture	0	0	1	0	0	0	0	0	0	1
Home Economics	1	0	0	0	0	0	0	0	1	2
Total	101	53	132	107	71	82	67	120	122	855

Table 41

Distribution of Teachers' Needs for Instructional Materials across Subject Areas for Spanish Speakers: First through Third Grades

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	21	12	18	14	16	11	12	14	11	29
Spanish Language Arts	68	41	88	68	69	42	35	57	37	505
Natural Sciences	24	13	47	25	22	18	14	26	24	213
Social Sciences	31	12	47	31	24	22	20	34	20	241
Mathematics	27	24	46	40	17	18	16	25	44	257
Technical/Trade/Industrial	1	0	1	1	1	1	0	1	1	7
Business/Office Occupations	1	0	1	1	1	1	0	1	1	7
Fine Arts	6	1	7	7	4	5	5	11	5	51
Health, Phys. Ed., Recreation	5	3	14	6	5	7	6	9	9	64
Agriculture	2	0	1	1	1	1	0	1	3	10
Home Economics	2	1	2	2	2	2	1	2	3	17
Total	188	107	272	196	162	128	109	181	158	1,501

Table 42

Distribution of Teachers' Needs for Instructional Materials across Subject Area for Spanish Speakers: Fourth and Fifth Grades

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	20	10	14	13	17	12	11	12	7	116
Spanish Language Arts	30	25	47	35	39	20	14	19	16	245
Natural Sciences	17	12	26	22	24	17	13	22	13	166
Social Sciences	21	12	33	27	22	18	13	20	11	177
Mathematics	16	14	25	26	15	12	11	12	18	149
Technical/Trade/Industrial	2	2	1	2	2	3	2	2	2	18
Business/Office Occupations	1	2	1	3	2	2	2	2	2	17
Fine Arts	2	1	4	3	1	1	3	3	1	19
Health, Phys. Ed., Recreation	2	0	2	1	2	2	2	7	2	20
Agriculture	1	1	1	1	1	1	1	1	1	9
Home Economics	0	0	0	1	1	1	1	0	0	4
Total	112	79	154	134	126	89	73	100	73	940

Table 43

Distribution of Teachers' Needs for Instructional Materials across Subject Areas for Spanish Speakers: Sixth through Eighth Grades

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	12	9	8	6	9	6	6	7	8	71
Spanish Language Arts	13	18	25	22	23	15	11	14	17	168
Natural Sciences	14	7	20	18	11	10	7	12	13	112
Social Sciences	24	13	26	25	14	8	8	18	8	144
Mathematics	12	12	16	13	8	6	5	9	14	95
Technical/Trade/Industrial	0	0	0	0	0	0	0	0	1	1
Business/Office Occupations	0	0	2	0	0	0	0	1	1	4
Fine Arts	0	1	1	0	0	1	1	1	1	6
Health, Phys. Ed., Recreation	1	0	1	1	0	1	1	3	2	10
Agriculture	0	0	0	0	0	0	0	0	0	0
Home Economics	1	2	3	0	1	0	0	0	1	8
Total	87	62	102	85	66	47	39	65	66	619

Table 44

Distribution of Teachers' Needs for Instructional Materials across Subject Areas for Spanish Speakers: Ninth through Twelfth Grades

Subject Area	Type of Instructional Material									
	High Interest Low Skill	Remedial	Basic	Supple-mentary	Reading	Visual	Audio	Audio-visual	Manipu-lative Material	Total
English Language Arts	3	3	5	2	5	3	2	6	3	32
Spanish Language Arts	16	11	9	13	9	6	3	10	6	83
Natural Sciences	6	4	9	9	3	2	2	6	5	46
Social Sciences	14	9	20	21	7	4	3	12	2	92
Mathematics	9	10	11	10	4	4	2	8	7	65
Technical/Trade/Industrial	3	0	2	1	0	0	0	1	3	10
Business/Office Occupations	0	0	4	2	0	1	0	2	2	11
Fine Arts	1	0	1	0	0	0	0	2	1	5
Health, Phys. Ed., Recreation	1	0	2	1	1	1	0	2	1	9
Agriculture	0	0	2	0	0	0	0	0	0	2
Home Economics	0	0	5	1	0	0	0	1	1	8
Total	53	37	70	60	29	21	12	50	31	363

rankings are very much alike for grade levels from 1 to 12, their preschool level responses differ. Teachers have greater needs for manipulative materials, ranked second by teachers and sixth by directors. Supplementary materials, ranked second by directors, are ranked fourth by teachers; and reading materials, ranked fourth by directors, are ranked seventh by teachers. Teachers and directors appear to have different perceptions of the type of materials needed at the preschool level.

Basic materials are most needed for Spanish language arts up to the high school level. High interest/low skill, supplementary, and reading materials are about equally needed for this subject area. The same need pattern is found for the social sciences, except that the need for reading material diminishes as grade levels increase. For mathematics, the need for basic materials overall is about the same as the need for supplementary materials. High interest/low skill and remedial math materials are needed more than are reading materials. These results are consistent with the results for the directors.

Both directors and teachers selected the same basic subject areas and types of materials when expressing their needs, although the rankings of their need frequencies vary somewhat. The most noticeable difference between the two groups accurs at the preschool level for types of instructional materials. In general, both groups showed greatest need for Spanish language arts and a variety of types of instructional materials--Basic, supplementary, high interest/low skill, reading, and audio-visual.

As one final note, the reader should not view the reported needs for types of materials as necessarily mutually exclusive. Rather, the reader

should realize that it is possible, indeed desireable, for materials to reflect more than one of the types or characteristics we have used in this survey. For instance, Spanish Language Arts materials may be basic curriculum materials that are comprised of high interest/low skill readings as well as ausio visual presentations. The typology of materials used here should be viewed as descriptive of features most desired in materials to be used in bilingual programs in the various subject areas and grade levels.

Problems with Materials

The teachers were asked on the tenth question of the Teacher Questionnaire to describe instructional materials they need. In responding to the question teachers specified their needs in terms of language, grade level, subject area, and type of material (basic, supplementary, etc.). This open-ended type of question allowed teachers a great deal of freedom in responding. However, those results shed little light on the reasons for the needs expressed.

The final, eleventh, question on the Teacher Questionnaire concerned problems that teachers experience in attempting to obtain or use materials (Figure 12). The question listed seven possible problems with materials. Teachers were asked to check the problems they had encountered. This information is intended to supplement the results for the previous question on need for materials (question 10, Teacher Questionnaire).

The results from this question provide information about the extent to which teachers feel that they lack materials because of limited selection, limited knowledge about what materials are available, and limited funds with which to acquire materials. Information is also provided about the difficulties teachers have with the materials they do have because they are inappropriate, insufficiently described, require special training, or arrive inconveniently late.

Dissemination and Assessment Centers can use this infomation to make publishing and dissemination decisions based on the extent to which (1) commercial materials adequately satisfy needs, (2) accurate and useful information about available materials is needed, (3) cost is a

11. If you have experienced any of the problems listed below in attempting to obtain or to use materials, please check in the blank beside the problems you have had.

Problems	Response
1. Limited selection of commercial materials	_____
2. Insufficient information describing currently available materials	_____
3. Insufficient information about what materials are available	_____
4. Lack of appropriate materials	_____
5. Late arrival of ordered materials	_____
6. Lack of training for using materials	_____
7. Lack of money to acquire materials	_____

Figure 12. Problems with Materials (Teacher Question 11)

factor in obtaining needed materials, and (4) improved order processing and material delivery is needed.

To the extent that materials are inappropriate or training is needed for using materials, RCs and DACs may provide teacher training in adapting materials and in using materials. If these are insignificant problems, then RCs and DACs may elect to allocate resources for other purposes.

The results for Question 11, presented in Table 45, are taken from the entire sample of 573 teachers. An entry in the "Frequency" column is the number of teachers who indicated they have experienced the problem associated with that entry.

At least 200 teachers had encountered most of the seven problems listed. The most outstanding problem concerned the lack of appropriate materials (item 4), checked by 58% of the teachers. This high proportion of responses indicates that most teachers need materials, not necessarily because they have none, but because they are dissatisfied with what they have.

About 51% of the teachers complained about the limited selection of commercial materials (item 1). Since commercial publishers have barely entered the bilingual market, the need for MDCs to produce materials and for DACs to publish them is clearly validated.

Because 49% of the teachers say that information describing available materials is insufficient (item 2), perhaps additional effort is needed to provide the kind of information teachers need for selecting appropriate material. This observation is supported further since 44% of the teachers indicated that they do not have enough information about

Table 45

Teacher Responses to Problems Experienced in Attempting to Obtain or Use Materials (N=573)

	Problems	Frequency	Percentage
1.	Limited selection of commercial materials	290	50.6
2.	Insufficient information describing currently available materials	278	48.5
3.	Insufficient information about what materials are available	253	44.2
4.	Lack of appropriate materials	334	58.3
5.	Late arrival of ordered materials	254	44.3
6.	Lack of training for using materials	205	35.8
7.	Lack of money to acquire materials	253	44.2

available materials (item 3). Dissemination strategies for such information need to ensure that it reaches teachers.

Late arrival of materials (item 5) and lack of money to acquire materials (item 7) are problems for 44% of the teachers. That such a large proportion of teachers have experienced these problems should alert DACs to consider them in printing materials and processing orders.

Lack of training for using materials (item 6) is a problem for a small, but substantial, proportion (36%) of teachers. Resource Centers may be able to aleviate this problem for clients in their service areas. MDCs and DACs should design their products to avoid this problem when producing and publishing materials.

Since a large proportion of the teachers sampled report various problems with materials, much of the need for materials they expressed in question 10 may be due to dissatisfaction with materials already available, as well as lack of knowledge about existing materials. Network centers can use the information from these results in guiding policy decisions concerning materials development and information dissemination.

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APPENDIX

PROJECT DIRECTOR QUESTIONNAIRE

Name of Respondent _____ Project Title _____

School District _____

1. Please indicate in the chart below the non-English language involved in the project and the number of students in each grade level.

NUMBER OF STUDENTS PER GRADE LEVEL

Grade / Non-English Language	Early Childhood	K	1	2	3	4	5	6	7	8	9	10	11	12

2a. If your project has any of the following equipment available, rate the usefulness of each item to your project by writing the number corresponding to your response, from the scale below, in the blank to the right of the item (first column).

2b. If your project does NOT have some of the equipment available, rate the usefulness of the items to your project IF THEY WERE AVAILABLE by writing the number corresponding to your response in the second column, below.

1-Not useful 2-Somewhat useful 3-Very useful

Equipment	Equipment IS Available	Equipment IS NOT Available
1 Language laboratory.....	_____	_____
2 Tape recorder.....	_____	_____
3 Record player.....	_____	_____
4 Slide projector.....	_____	_____
5 Film projector.....	_____	_____
6 Film strip projector.....	_____	_____
7 Overhead projector.....	_____	_____
8 Opaque overhead projector...	_____	_____
9 Television.....	_____	_____
10 Duplicator.....	_____	_____
11 Thermofax.....	_____	_____
12 Video taperecorder.....	_____	_____

3a. Please rate the importance of the information relevant to your project received from any of the sources listed below. Indicate your response by writing the number corresponding to your response in the blank to the right of the information source.

3b. If you are NOT receiving information from some of the sources listed, indicate the importance of such information to your project if it were available to you. Write the number corresponding to your response in the appropriate blanks below.

1--Not important at all 2--Somewhat important 3--Very important

Source	Information Received	Information NOT Received
1 Funding agency(ies)		
2 State Department of Education		
3 Materials Development Centers (Title VII)		
4 Resource Centers (Title VII)		
5 Dissemination and Assessment Centers (Title VII)		
6 Other bilingual project directors		
7 Commercial publishers		
8 Colleges and universities		
9 National Institute of Education (NIE) Centers		
10 U.S. Office of Education (USOE)		
11 U.S. Office of Bilingual Education (USOBE)		
12 Other--specify _____		

4. Rate the value of having information on the topics listed below. If you have already received information on some of the topics, please indicate this by responding in the first column. If you have NOT received information on some of the topics, respond in the second column. Indicate your response by writing the number corresponding to your choice from the following scale:

1--Not valuable 2--Somewhat valuable 3--Very valuable

Topic	Have Received Information	Have NOT Received Information
1 Other bilingual projects		
2 Bilingual instructional materials		
3 Bilingual education research		
4 Conferences/meetings/workshops concerning bilingual education		
5 Teacher/staff development and training programs		
6 Design of bilingual curriculum		
7 Evaluation of bilingual projects		
8 Other--specify _____		

5a. Below is a list of areas for teacher training. Please rate your need for teacher training in these areas by referring to the scale below and writing the appropriate number in the "Extent of Need" column.

1-No need 2-Some need 3-Great need

5b. If you have indicated needs for teacher training in some of the areas listed below (left), please check in the appropriate columns below the problem areas encountered in meeting these needs.

Training Areas \ List of Problems	Extent of Need	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Materials selection.....										
2 Evaluating bilingual materials.....										
3 Adapting materials for bilingual classes.....										
4 Developing teacher-made materials.....										
5 Writing instructional objectives.....										
6 Developing criterion-referenced test.....										
7 Evaluating student performance.....										
8 Student selection and placement.....										
9 Diagnosing learning problems.....										
10 Testing for language dominance.....										
11 Language ability testing.....										
12 Bilingual teaching strategies.....										
13 Individualized instruction.....										
14 Team teaching.....										
15 Using paraprofessionals.....										
16 Teaching reading in the bilingual program....										
17 Teaching the content areas in the bilingual program.....										
18 Early childhood education for bilingual children.....										
19 Affective learning in the bilingual program.....										
20 Classroom management and discipline.....										
21 Facilitating parent involvement.....										
22 Using community resources.....										
23 Coordinating the bilingual program with the overall school curriculum.....										
24 Evaluating the bilingual project.....										
25 Disseminating information about the program to parents, other teachers, other projects, etc.										
26 Bilingual laws and legislation.....										
27 Other -- specify _____.....										

6a. Below is a list of areas for project paraprofessional training. Please rate your need for project paraprofessional training in these areas by referring to the scale below and writing the appropriate number in the "Extent of Need" column.

1-No need 2-Some need 3-Great need

6b. If you have indicated needs for project paraprofessional training in some of the areas listed below (left), please check in the appropriate columns below the problem areas encountered in meeting these needs.

Training Areas \ List of Problems	Extent of Need	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Evaluating student performance.....										
2 Diagnosing learning problems.....										
3 Bilingual teaching strategies.....										
4 Individualized instruction.....										
5 Teaching reading in the bilingual program.....										
6 Teaching content areas in the bilingual program.....										
7 Early childhood education for bilingual children.....										
8 Affective learning in the bilingual program.....										
9 Classroom management and discipline.										
10 Bilingual laws and legislation.....										
11 Philosophy and rational for bilingual education.....										
12 Working effectively with head teachers.....										
13 Small group processes.....										
14 Record-keeping.....										
15 Additional language training.....										
16 Other--specify_____.....										

7a. Below is a list of areas for project administrators training. Please rate your need for project administrators training in these areas by referring to the scale below and writing the appropriate number in the "Extent of Need" column.

1-No need 2-Some need 3-Great need

7b. If you have indicated needs for project administrators training in some of the areas listed below (left), please check in the appropriate columns below the problem areas encountered in meeting these needs.

Training Areas / List of Problems	Extent of Need	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of funds	Schedule conflicts	Lack of release time	Lack of Interest	Other, please specify.....
1 Evaluating student progress.....										
2 Student selection and placement.....										
3 Facilitating parent involvement.....										
4 Identifying and using community resources.....										
5 Coordinating the bilingual program with the overall school curriculum..										
6 Evaluating the bilingual program....										
7 Disseminating information to parents, teachers, other project directors, etc.....										
8 Bilingual laws and legislation.....										
9 Bilingual program planning and organization.....										
10 Proposal development.....										
11 Staff development/inservice training for staff.....										
12 Management of interpersonal relations and interagency coordination..										
13 Standardized testing.....										
14 Staff selection.....										
15 Budgeting.....										
16 Other--specify_____.....										

8. Please note the codes to the left of the items in the lists which follow:

Code	Grade Ranges
1	Early Childhood, Kindergarten
2	1-3
3	4-5
4	6-8
5	9-12

Code	Subject Areas
01	English Language Arts
02	Non-English Language Arts
03	Natural Sciences
04	Social Sciences
05	Mathematics
06	Technical/Trade/Industrial
07	Business/Office Occupations
08	Fine Arts
09	Health, Physical Education, and Recreation
10	Agriculture
11	Home Economics

Code	Measurement Instruments
1	Achievement--Norm-Referenced
2	Achievement--Criterion-Referenced
3	Aptitude/Ability
4	Placement/Readiness

Using the form below, please describe your needs for measurement instruments by using the codes above to indicate the grade, subject, and type of test needed. In the first column of the form, write in the language needed; in the next three columns, write in the code numbers corresponding to the grade level, subject area, and type of instrument needed. Please write only one code in each column for each row. Use as many rows as needed for responding.

Language of Instrument	Grade Range	Subject Area	Type of Measurement Instruments

9 Please note the codes to the left of the items in the lists which follow:

Code	Grade Ranges
1	Early Childhood, Kindergarten
2	1-3
3	4-5
4	6-8
5	9-12

Code	Subject Areas
01	English Language Arts
02	Non-English Language Arts
03	Natural Sciences
04	Social Sciences
05	Mathematics
06	Technical/Trade/Industrial
07	Business/Office Occupations
08	Fine Arts
09	Health, Physical Education and Recreation
10	Agriculture
11	Home Economics

Code	Types of Materials
1	High Interest/Low Skill
2	Remedial
3	Basic
4	Supplementary
5	Reading
6	Visual
7	Audio
8	Audio-Visual
9	Manipulative Material

Using the form below, please describe your needs for instructional materials by using the codes above to indicate the grade, subject, and type of instructional materials needed. In the first column of the form, write in the language needed; in the next three columns, write in the code numbers corresponding to the grade level, subject area, and type of instructional materials needed. Please write only one code in each column for each row. Use as many rows as needed for responding.

Language of Instrument	Grade Range	Subject Area	Type of Instructional Materials

TEACHER QUESTIONNAIRE

Project Title _____ School _____

School District _____ Non-English Language _____

1. How many years have you taught in bilingual education? _____

2. What is the total number of years that you have taught? _____

3. Please indicate the subject areas and the grade levels which you teach bilingually by listing the subject areas you teach in the first column of the chart below. Then mark the boxes to the right which correspond to the grade levels at which you teach each subject.

Subject Areas Taught \ Grade Level	Early Childhood	K	1	2	3	4	5	6	7	8	9	10	11	12

4a. If your project has any of the following equipment available, rate the usefulness of each item to your project by writing the number corresponding to your response, from the scale below, in the blank to the right of the item (first column).

4b. If your project does NOT have some of the equipment available, rate the usefulness of the items to your project IF THEY WERE AVAILABLE by writing the number corresponding to your response in the second column, below.

1-Not useful 2-Somewhat useful 3-Very useful

Equipment	Equipment IS Available	Equipment IS NOT Available
1. Language laboratory.....	_____	_____
2. Tape recorder.....	_____	_____
3. Record player.....	_____	_____
4. Slide projector.....	_____	_____
5. Film projector.....	_____	_____
6. Film strip projector.....	_____	_____
7. Overhead projector.....	_____	_____
8. Opaque overhead projector.....	_____	_____
9. Television.....	_____	_____
10. Duplicator.....	_____	_____
11. Thermofax.....	_____	_____
12. Video taperecorder.....	_____	_____

5a. Please rate the importance of the information relevant to your project received from any of the sources listed below. Indicate your response by writing the number corresponding to your response in the blank to the right of the information source.

5b. If you are NOT receiving information from some of the sources listed, indicate the importance of such information to your project if it were available to you. Write the number corresponding to your response in the appropriate blanks below.

1--Not important at all 2--Somewhat important 3--Very important

Source	Information Received	Information NOT Received
1 Funding agency(ies)		
2 State Department of Education		
3 Materials Development Centers (Title VII)		
4 Resource Centers (Title VII)		
5 Dissemination and Assessment Centers (Title VII)		
6 Other bilingual project directors		
7 Commercial publishers		
8 Colleges and universities		
9 National Institute of Education (NIE) Centers		
10 U.S. Office of Education (USOE)		
11 U.S. Office of Bilingual Education (USOBE)		
12 Other--specify _____		

6. Rate the value of having information on the topics listed below. If you have already received information on some of the topics, please indicate this by responding in the first column. If you have NOT received information on some of the topics, respond in the second column. Indicate your response by writing the number corresponding to your choice from the following scale:

1--Not valuable 2--Somewhat valuable 3--Very valuable

Topic	Have Received Information	Have NOT Received Information
1 Other bilingual projects		
2 Bilingual instructional materials		
3 Bilingual education research		
4 Conferences/meetings/workshops concerning bilingual education		
5 Teacher/staff development and training programs		
6 Design of bilingual curriculum		
7 Evaluation of bilingual projects		
8 Other--specify _____		

7a. Below is a list of areas for teacher training. Please rate your need for teacher training in these areas by referring to the scale below and writing the appropriate number in the "Extent of Need" column.

1-No need 2-Some need 3-Great need

7b. If you have indicated needs for teacher training in some of the areas listed below (left), please check in the appropriate columns below the problem areas encountered in meeting these needs.

Training Areas \ List of Problems	Extent of Need	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Materials selection.....										
2 Evaluating bilingual materials.....										
3 Adapting materials for bilingual classes.....										
4 Developing teacher-made materials.....										
5 Writing instructional objectives.....										
6 Developing criterion-referenced test.....										
7 Evaluating student performance.....										
8 Student selection and placement.....										
9 Diagnosing learning problems.....										
10 Testing for language dominance.....										
11 Language ability testing.....										
12 Bilingual teaching strategies.....										
13 Individualized instruction.....										
14 Team teaching.....										
15 Using paraprofessionals.....										
16 Teaching reading in the bilingual program....										
17 Teaching the content areas in the bilingual program.....										
18 Early childhood education for bilingual children.....										
19 Affective learning in the bilingual program.....										
20 Classroom management and discipline.....										
21 Facilitating parent involvement.....										
22 Using community resources.....										
23 Coordinating the bilingual program with the overall school curriculum.....										
24 Evaluating the bilingual project.....										
25 Disseminating information about the program to parents, other teachers, other projects, etc.										
26 Bilingual laws and legislation.....										
27 Other -- specify _____										

8a. Below is a list of areas for project paraprofessional training. Please rate your need for project paraprofessional training in these areas by referring to the scale below and writing the appropriate number in the "Extent of Need" column.

1-No need 2-Some need 3-Great need

8b. If you have indicated needs for project paraprofessional training in some of the areas listed below (left), please check in the appropriate columns below the problem areas encountered in meeting these needs.

Training Areas \ List of Problems	Extent of Need	Trainers are unidentified	Trainers known but not available	Training materials unidentified	Training materials do not exist	Lack of funds	Schedule conflicts	Lack of release time	Lack of interest	Other, please specify.....
1 Evaluating student performance.....										
2 Diagnosing learning problems.....										
3 Bilingual teaching strategies.....										
4 Individualized instruction.....										
5 Teaching reading in the bilingual program.....										
6 Teaching content areas in the bilingual program.....										
7 Early childhood education for bilingual children.....										
8 Affective learning in the bilingual program.....										
9 Classroom management and discipline.										
10 Bilingual laws and legislation.....										
11 Philosophy and rational for bilingual education.....										
12 Working effectively with head teachers.....										
13 Small group processes.....										
14 Record-keeping.....										
15 Additional language training.....										
16 Other--specify_____.....										

9. Please note the codes to the left of the items in the lists which follow:

Code	Grade Ranges
1	Early Childhood, Kindergarten
2	1-3
3	4-5
4	6-8
5	9-12

Code	Subject Areas
01	English Language Arts
02	Non-English Language Arts
03	Natural Sciences
04	Social Sciences
05	Mathematics
06	Technical/Trade/Industrial
07	Business/Office Occupations
08	Fine Arts
09	Health, Physical Education, and Recreation
10	Agriculture
11	Home Economics

Code	Measurement Instruments
1	Achievement--Norm-Referenced
2	Achievement--Criterion-Referenced
3	Aptitude/Ability
4	Placement/Readiness

Using the form below, please describe your needs for measurement instruments by using the codes above to indicate the grade, subject, and type of test needed. In the first column of the form, write in the language needed; in the next three columns, write in the code numbers corresponding to the grade level, subject area, and type of instrument needed. Please write only one code in each column for each row. Use as many rows as needed for responding.

Language of Instrument	Grade Range	Subject Area	Type of Measurement Instruments

10. Please note the codes to the left of the items in the lists which follow:

Code	Grade Ranges
1	Early Childhood, Kindergarten
2	1-3
3	4-5
4	6-8
5	9-12

Code	Subject Areas
01	English Language Arts
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03	Natural Sciences
04	Social Sciences
05	Mathematics
06	Technical/Trade/Industrial
07	Business/Office Occupations
08	Fine Arts
09	Health, Physical Education and Recreation
10	Agriculture
11	Home Economics

Code	Types of Materials
1	High Interest/Low Skill
2	Remedial
3	Basic
4	Supplementary
5	Reading
6	Visual
7	Audio
8	Audio-Visual
9	Manipulative Material

Using the form below, please describe your needs for instructional materials by using the codes above to indicate the grade, subject, and type of instructional materials needed. In the first column of the form, write in the language needed; in the next three columns, write in the code numbers corresponding to the grade level, subject area, and type of instructional materials needed. Please write only one code in each column for each row. Use as many rows as needed for responding.

Language of Instrument	Grade Range	Subject Area	Type of Instructional Materials

11. If you have experienced any of the problems listed below in attempting to obtain or to use materials, please check in the blank beside the problems you have had.

Problems	Response
1. Limited selection of commerical materials	_____
2. Insufficient information describing currently available materials	_____
3. Insufficient information about what materials are available	_____
4. Lack of appropriate materials	_____
5. Late arrival of ordered materials	_____
6. Lack of training for using materials	_____
7. Lack of money to acquire materials	_____

EXECUTIVE SUMMARY
of the
Summary Report on the
National Assessment Survey of Title VII ESEA
Basic Project Directors' and Teachers'
Needs for the Products and Services of the
National Network of Centers for Bilingual Education

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I. INTRODUCTION

PURPOSE OF SURVEY

The National Network of Centers for Bilingual Education were established to develop instructional materials and provide resource services to the Title VII Projects. The purpose of this study was to survey a national sample of Title VII directors and teachers to assess their needs for materials development and technical assistance. The specific intent of the study was to assist network centers in making decisions on which types of materials, training, and services should receive priority development.

SCOPE OF SURVEY

The survey was conducted nationwide during the Spring and Fall of 1977 by the three Dissemination and Assessment Centers (DACs) located in Austin, Texas. Fall River/Cambridge, Massachusetts, and Los Angeles, California. The Austin and Cambridge Centers collaborated in developing the survey instruments. Each Center was responsible for conducting the mail survey within the respective (Central, Eastern, and Western) service areas. The DAC at Austin conducted the data analysis and reporting.

II. METHODOLOGY

SURVEY PROCEDURE

The general design of the study was to survey all of the about 425 Title VIII Basic projects in the Country in 1977. The strategy was to send a Director Questionnaire to each of the Title VII project directors along with three or more Teacher Questionnaires. Directors were asked to distribute the Teacher Questionnaires to teachers at the different grade levels included in the project.

THE SAMPLE OF RESPONDENTS

Since there were about 425 Title VII projects in the nation in 1977, the sample of 170 projects indicates that about forty percent (40%) of the projects provided data for this survey.

According to DAC service area, the breakdown of 156 project directors shows:

Western Region: 48% (Los Angeles DAC)

Central Region: 37% (Austin DAC)

Eastern Region: 15% (Fall River/Cambridge DAC)

The corresponding numbers for the 573 teachers reporting are:

Western Region: 50%

Central Region: 43%

Eastern Region: 6%

These rankings are consistent with national data showing the heaviest concentrations to Title VII projects in the Western and Central regions of the Country. However, data are not available on the degree to which the response rates for directors and teachers are proportionately consistent with the numbers of projects in each region.

LANGUAGE GROUPS REPRESENTATION IN SAMPLE

According to language group, 132 of 156 projects, about 85%, served a Spanish-speaking population. Portuguese speakers were served by ten projects, Japanese-Cantonese by six, Filipino by six, Vietnamese by five, Italian by five, Navajo by five, and French-Creole by three projects. An additional 14 language groups were served by one project each. (Projects total to more than 170 because some projects serve more than one language group.) In terms of numbers of children served by responding projects, about 80% were Spanish speakers. Eighty-eight (88) percent of responding teachers taught in Spanish.

GRADE LEVELS AND SUBJECT AREAS

Grade levels in projects surveyed showed largest numbers of pupils being served in grades K-3 (61%). Less heavy concentrations were found at grades 4-6 (20%), then declining numbers at grades 7 through 12.

Forty-two percent (42%) of classes taught in bilingual programs were Language Arts, 35% were Math and Social Studies. Science and Fine Arts areas were the next most frequently taught areas (14%).

TEACHERS' EXPERIENCE

Fifty-one (51) percent of responding teachers had less than five years of teaching experience; 26% had 6-10 years total teaching experience.

About 91% of teachers had less than five years of bilingual teaching experience. Of these, about 57% had two or less years of teaching experience in bilingual education.

Overall, while the sample may be relatively new to bilingual education teaching, these teachers have considerable general teaching experience.

DATA ANALYSIS

Frequencies and percentages were calculated separately for director and teacher responses. Other breakdowns of data were by DAC, Resource Center, and Material Development Center service areas. Director and teacher responses were analyzed seperately.

III. FINDINGS

A. Instructional Equipment.

Both directors and teachers rated the availability and usefulness of various types of instructional equipment used in bilingual education classrooms.

1. Directors' Responses

a. The least available item of instructional equipment was the language laboratory: 72% of responding directors lacked this equipment. Other items generally not available include video tape recorders (unavailable to 46% of directors) and televisions (unavailable to 44% of directors).

b. Directors reported that the most useful items were the tape recorder, record player, duplicator, thermoflax, projectors and language labs.

Least useful items were overhead projector, opaque overhead projector, and television, but even these lowest-rated items were perceived to be "somewhat useful."

c. Overall, directors lacking an item of equipment tend to rate the potential usefulness of that equipment LOWER than the directors who have the item available. This suggests that most directors have the equipment they feel they need most.

2. Teachers' Responses.

a. Most teachers do not have a language laboratory or a video tape recorder.

b. Teachers and directors generally agree on the most and least useful available equipment. There is less agreement on the potential usefulness of items not available to them. Teachers who lacked items of equipment gave highest ratings of potential usefulness to tape recorder, record player (disagreeing with directors), filmstrip projector, duplicator and thermofax.

c. Teachers lacking record players, projectors and televisions tended to give higher overall ratings than directors on the potential usefulness of these unavailable items.

B. Information Sources.

Respondents were asked to rate the importance of information received and not received from a list of sources.

1. Directors' Responses.

a. Less than one-third of directors had received information from NIE Centers (e.g., regional laboratories) but more than two-thirds had received information from bilingual projects, SEAs, commercial publishers, colleges and universities, USOE, and U.S. Office of Bilingual Education (USOBE). About 20% of directors had not received information from Network Centers.

b. Funding agencies and USOBE were rated as providing the most important information to directors who had received information.

c. Directors not receiving information from certain sources rated the potential utility of such information highest for funding agencies, Network Centers, USOBE, other bilingual projects, and USOE.

d. Least important ratings, whether or not information had been received by directors, were assigned to NIE Centers, commercial publishers, and colleges/universities.

e. Directors who had not received information from an information source rated the potential importance of such information highly. Only NIE centers were seen as "somewhat important" actual and potential sources of information.

2. Teachers' Responses.

a. Only 17% of responding teachers had received information from NIE Centers, about one-fourth had received info from USOE, while 32% had received information from USOBE; 71% had received information from Title VII Centers (Materials Development Centers, Resource Centers and Dissemination, Assessment Centers) and from colleges and universities.

b. Among teachers receiving information from certain sources, the most important ratings were given to information from funding agencies, Title VII Centers, other bilingual projects, SEAs, USOBE, and USOE.

c. Teachers not receiving information rated potential utility highest for the Title VII Centers, USOBE, and SEAs.

d. Least important ratings by teachers receiving information were assigned to NIE Centers; least important ratings by teachers not receiving information were assigned to USOE, NIE Centers, commercial publishers, funding agencies, and colleges/universities.

e. Teachers not receiving information tended to rate the potential of such information as being of less importance than information already received. Directors were found to present the opposite pattern, assigning high potential utility to information not received.

C. Information Topics.

Directors and teachers were asked to rate the value of information on each of seven topics and to indicate whether or not they had actually received any information.

1. Directors' Responses.

a. Almost all of the Directors (94%) had received information on conferences/meetings/workshops concerning bilingual education. Large percentages of directors had also received information on bilingual instructional materials (88%), teacher/staff development training programs (79%), and information about other bilingual projects (68%).

b. Only about 50% of the directors had received information on bilingual education research, evaluation of bilingual projects, and design of bilingual curriculum.

c. For directors, the most valuable information received was, in descending order, information about: conferences/meetings/ workshops concerning bilingual education, bilingual instructional materials, teacher/staff development training programs, and information on other bilingual projects. Ratings were slightly lower for information on research, evaluation, and design of curriculum.

d. Among directors not receiving information, ratings of all items were extremely high. They expected the missing information to be very valuable to them.

e. Available data are interpreted to indicate "that better quality information and better distribution of information on these topics (curriculum design, research and evaluation) would be of great value to directors; there is a substantial need for high quality information...; (and) an effective dissemination mechanism (Report, page 51)."

2. Teachers' Responses.

a. Almost all of the teachers responding had received information on conferences/meetings/workshops concerning bilingual education (94%), bilingual instructional materials (88%), and teacher/ staff development and training programs (87%). A large percentage of teachers also had received information on design of bilingual curriculum (67%). (Teachers rated the curriculum design information as being more valuable than did directors.)

b. About half the teachers had received information on the remaining three topics: evaluation of bilingual projects (56%), information on other bilingual projects (57%), and bilingual education research (51%).

c. The most valuable information teachers received dealt with conferences/meetings/workshops in bilingual education, bilingual instructional materials, teacher/staff development training programs, and design of bilingual curriculum. Ratings were slightly lower on the topics of research, evaluation, and information about other bilingual projects.

d. The potential value of information was very high for all topics, except information about other bilingual projects. This topic received the lowest rating by teachers, whether or not they received information. In general, teachers gave slightly lower potential value ratings than did non-recipient directors. Much of what reaches practitioners is less valuable and useful than anticipated...

D. Training Needs.

A large part of the survey focused on attempting to determine the extent of training needs and the specific areas in which training is needed for teachers, paraprofessionals, and administrators. Twenty-six (26) "Training Areas" were identified plus eight (8) "Problem Areas" in obtaining needed training.

1. What do directors say about teacher training needs? And, what are the major problem areas?

a. Directors feel that the major needs for teacher training are: adapting materials, diagnosing learning problems, bilingual teaching strategies, teaching reading, teaching content areas, coordinating the bilingual program with school curriculum, developing teacher-made materials, and facilitating parential involvement.

b. Project Directors identified two major problems in getting needed teacher training: unidentified trainers and lack of release time. Less frequently identified problems are: unidentified training materials, lack of funds, and schedule conflicts.

2. What do teachers say about their training needs?

a. The major need areas are: adapting materials, developing teacher-made materials, coordinating the bilingual program with the school curriculum, diagnosing learning problems, bilingual teaching strategies, teaching reading and, teaching content areas. Teachers perceptions generally agree with directors', except for "facilitating parental involvement" which received a lower need rating from teachers.

b. Teachers believe that two major problems are responsible for not getting needed training: lack of release time and unidentified trainers. Training materials not identified and schedule conflicts are also frequently mentioned problems. Teachers rate release time ahead of unidentified trainers while directors reversed the order.

3. What do directors and teachers say about the training needs of paraprofessionals?

a. Directors' feel that paraprofessionals need training in: bilingual teaching strategies, teaching content areas bilingually, teaching reading, and diagnosing learning problems.

b. Teachers' identified: bilingual teaching strategies, teaching reading, teaching content areas, diagnosing learning problems, and affective learning as the priority training needs for paraprofessionals.

c. Directors report that the greatest problems in getting paraprofessional training are unidentified trainers, lack of release time, and unidentified training materials.

d. Teachers report that problems are lack of release time, unidentified trainers, schedule conflicts, and lack of funds.

4. What do directors say about their own training needs and problems in meeting them?

a. Among directors, the greatest need for training is in coordinating the bilingual program with the overall school curriculum. Reasons for not getting training are schedule conflicts and unidentified trainers.

b. Directors also need training in staff development and inservice training for staff, evaluating the bilingual program, managing interpersonal relationships and facilitating parent involvement. These training needs all relate to managing a project within the school environment. Associated problem areas in attempting to meet these training needs are unidentified trainers, schedule conflicts, and unidentified training materials.

E. Need for Measurement Instruments.

Directors and teachers were asked to report their needs for psychomotor instruments. They described their needs in terms of language, grade levels, subject area, and type of instrument. Grade levels from E.C. through 12 were divided into ranges (E.C. & K., 1-3, 4-5, 6-8, 9-12). Eleven subject areas and three types of measurement instruments were identified within each grade range. Types of tests were described as achievement, aptitude-ability or placement-readiness (diagnosis). Achievement tests were further classified as norm-referenced and criterion-referenced.

Only the data on the need for instruments for Spanish/English bilingual programs is included in the analysis. Data pertaining to the need for materials for other languages was excluded from the present analysis since there were insufficient responses to each of the other language needs to provide a reliable estimate of the need for each group and to avoid spurious inferences that might occur if the data for all languages represented in the sample were represented as homogeneous.

1. Directors' Responses.

a. Instruments to assess Spanish language arts are consistently ranked highest among subject areas across all grades, followed by Mathematics, English language arts, natural sciences, and social sciences.

b. Norm-referenced and criterion-referenced achievement tests are most needed, followed by placement/readiness instruments.

2. Teachers' Responses.

a. Instruments to assess Spanish language arts and mathematics are highest-ranked subject areas. Placement/readiness tests and criterion-referenced achievement tests are most needed.

b. Teachers report greater need for placement/readiness tests at preschool level than other tests. At grades 1-3 both placement/readiness and criterion-referenced tests were most needed. Across all grade ranges, placement/readiness tests and criterion-referenced tests were most needed, followed by aptitude/ability and norm-referenced achievement instruments.

F. Instructional Materials

Only the data on the need for materials for Spanish/English bilingual programs was included in the analysis. Data pertaining to the need for materials for other languages was excluded from the present analysis since there were insufficient responses to each of the other language needs to provide a reliable estimate of the need for each group and to avoid spurious inferences that might occur if the data for all languages represented in the sample were represented as homogeneous.

1. Directors' Responses.

a. The subject area in which directors reported the greatest need is Spanish language arts. The need is greater in K-5 than at upper grades. Social sciences materials are ranked second overall, with lesser need at lower grades and greater need at the upper levels. Natural sciences, mathematics, English language arts, and fine arts rank next highest.

b. Among types of materials at all grade levels, directors believe that basic materials are most needed, followed by supplementary materials, high-interest/low skill materials, reading materials, and audio-visual materials.

c. Among types of material in Spanish language arts, directors reported greatest needs for basic materials, followed by reading, supplementary materials (except at high school level).

2. Teachers' Responses.

a. The subject area in which teachers reported the greatest need is Spanish language arts. Social science materials ranked second, followed by mathematics, natural sciences, English language arts, and fine arts. Spanish language arts materials are needed more at lower levels than upper levels. Social science materials are needed more at upper levels than lower levels.

b. Among types of materials at all grade levels, teachers' greatest need is for basic materials, followed by supplementary, and high interest/low skill. Unlike directors, teachers expressed greater need for audio-visual materials than for reading materials.

c. Among types of materials in Spanish language arts, teachers reported most need for basic materials (up to high school), high interest/low skill, supplementary, and reading materials are about equally needed.

G. Teachers' Problems with Materials.

Teachers were asked about problems they experience in attempting to obtain or use materials. Seven possible reasons were listed and teachers were asked to check problems they encountered. The results showed that:

1. At least 200 teachers had encountered most of the seven problems.

2. The most outstanding problem, checked by 58% of the teachers, concerned the lack of appropriate materials, indicating that most teachers need materials, not because they have none, but because they are dissatisfied with what they have.

3. Fifty-one percent of the teachers complained about the limited selection of commercial materials.

4. Forty-nine percent of teachers state that information describing materials is insufficient.

5. Forty-four percent state that they have insufficient information describing currently available materials.

6. Forty-four percent state that they have encountered problems with both late arrival of materials and lack of money to acquire materials.

7. Thirty-five percent report lack of training to use materials.

8. In general, teachers' problems with materials seem to be due to both dissatisfaction with materials already available and lack of knowledge about existing materials.

IV. CONCLUSION

Network Centers (and publishers) can use the information from these results in guiding policy decisions concerning inservice training, materials development and information dissemination.